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FRANCIS ALISON, JR.—A SURGEON OF THE REVOLUTION

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While the chief medical officers of the American Revolution have, for the main part, received a fair share of notice in the medical annals of this country, it is amazing how the rank and file of the medical patriots in the War of Independence have been shamefully neglected. When, in looking over the Continental Hospital Returns of Francis Alison, Jr., I sought for a biography of this faithful servitor of the sick and wounded, I searched in vain. Only here and there could be found a few fragmentary references. These should be worthy of a round-up in this place.

Francis Alison, Jr. was born on March 28, 1751, at New-London Cross-Roads in Chester County, Pennsylvania. His father, the Rev. Francis Alison, shortly afterwards removed with his family to Philadelphia and acquired considerable fame as teacher in the University of Pennsylvania, of which institution he was the first vice-provost.

From this "Academy," as it was then generally designated, Francis, Jr., on June 5, 1770, received the degree of A. B. (Fig. 1). He had attended Dr. Adam Kuhn's lectures on Materia Medica

Omnibus quos præsentes Literæ pervenerint.
Salutem.
Comitiis quinto
Baccalaureatus
Gul: Smith S.T.P. Collegii & Academiæ Præfectus.
Jos: Allison S.T.P. Coll: hujus Præfect: & Acad: Rector.
Eben: Kinnersley Ling: Angl: & Orat: Prof:
Jac: Davidson Lit: Hum: Prof:

Fig. 1.

Alison's Bachelor's Degree.

Courtesy of the Presbyterian Historical Society, Philadelphia, Pa.

Courtesy of the Presbyterian Historical Society, Philadelphia, Pa.

during 1769[1] and from the signatures appended to his diploma, it seems evident that Shippen, Rush and Morgan were also his teachers. Adam Kuhn had been appointed Professor of Materia Medica and Botany in 1768 and gave a course in Botany during 1768 and 1769, but seems to have dropped it in subsequent years. Francis Alison, Jr., continued in the study of botany as a science, along with his medical work, and from the many notes left among his papers relative to plants, their classification, etc., a subject at that time holding a peculiar fascination for the inhabitants of Chester County, it was presumed that he intended, at some period to publish a work in that field. He was also well versed in mineralogy, but the specimens which he left at the time of his death were not accompanied with any memoranda to distinguish their character or location.[2]

He continued his medical studies under the preceptorship of Dr. Samuel Duffield and, having paid the usual student's fee of five pounds to be applied to building the medical library, was admitted to the privilege of attending and observing the practice of the physicians and surgeons at the Pennsylvania Hospital. (Fig. 2.) He then continued his studies at the College and in 1773 the A. M. degree was conferred upon him. With these degrees he seems to have been content, for it appears he never received the M. D. degree at the University of Pennsylvania. The degree of Bachelor of Medicine was first conferred in 1768, the first medical honors thus given in America, but apparently it was not until the year 1790 that the Doctorate in Medicine was conferred upon graduates by the University of Pennsylvania, for in the July issue of the American Museum that year, Dr. William Shippen, in a "Short address, shewing the advantages of conferring the degree of doctor of medicine in the first instance, and pointing out a proper plan of a medical education," which was delivered at the commencement of the College of Philadelphia, stated, in part:

> Since our last commencement in this place a change in the form of conferring degrees, has been adopted by the learned and benevolent fathers of this seminary, which I propose to explain and justify.

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[1] Pepper, William, Dean, Medical School University of Pennsylvania, Personal communication.

[2] Hazard, Samuel, *Register of Pennsylvania*, 1828, Vol. 1, p. 303.

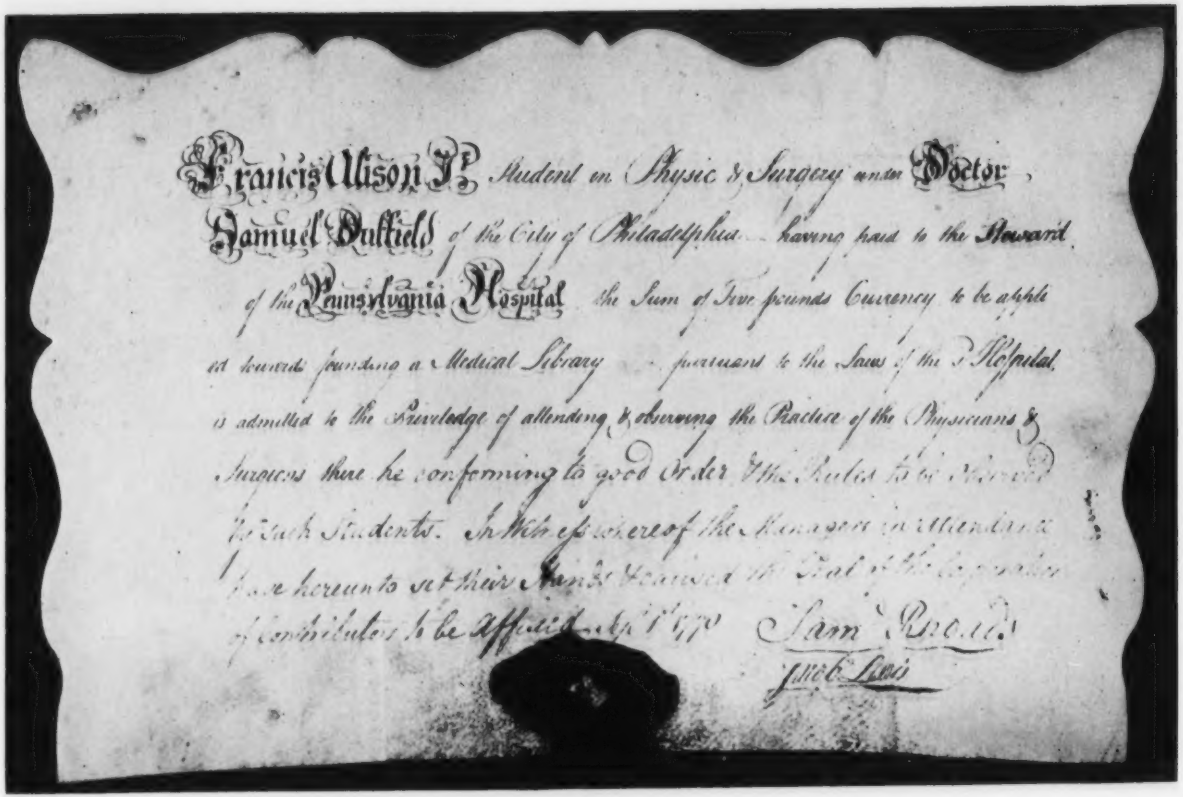

Francis Ulison Jr. Student in Physic & Surgery under Doctor
Samuel Duffield of the City of Philadelphia having paid to the Steward
of the Pennsylvania Hospital the Sum of Five pounds Currency to be applyd
as towards founding a Medical Library pursuant to the Laws of the Hospital
is admitted to the Priviledge of attending & observing the Practice of the Physicians &
Surgeons there he conforming to good Order & the Rules to be Given
to such Students. In Witness whereof the Managers in attendance
have hereunto set their Hands & caused the Seal of the Corporation
of Contributors to be affixed this 1st day of 1767 Sam Rhoads
Jno. Ross

Fig. 2.

Courtesy of the Presbyterian Historical Society, Philadelphia, Pa.

Until now, the highest medical honours have never been conferred upon students in the first instance. Whatever might have been their genius—whatever their industry—and however qualified by these, and the knowledge which had been the consequence of them, for the attainment of every reward in our power to give, they were obliged to stop at the bachelor's degree, being all the honour we could bestow, and to practice three years, with reputation in that subordinate capacity, before they could be raised to a higher one.

When the Revolutionary War broke out he was quick to join and became Surgeon in the Pennsylvania line. Soon after, when the medical organization of the Continental troops was revamped, he was assigned to the hospital department of the middle division of the army. That his marriage to Mary, daughter of John Mackay, of Philadelphia, had taken place at some previous date is revealed by the following letter addressed to him while in Camp by his father under date of July 31, 1776, a letter which is also of interest in disclosing the paternal pedagogue's solicitude for his surgically aspiring son:

I think you should not have carried your books to camp; you will get no money there; but may lose them.—You ought to write by every opportunity to me and to yr wife;—Cline, yr Patient is reduced by ye heat of the weather, and it is thought that he will die. Mr. Davidson says a Few drops of ye Spirits of Nitre mixd with the Tincture of Ruberb, and some other tincture, is a most sovereign remedy for the flux, that he was relieved by this when all Kuhn's other medicines could do him no Service; and ye whole or greatest part of ye virtue is in the Spirits of Nitre; every hint may be of service for I think yr business in curing this distemper, will be as great as ever it was;—"[3]

While he was in charge of the Continental hospital at Lititz, Pa., Dr. Alison fell victim to the prevailing epidemic and his wife joined him there to tender her devoted care. It was not unusual, in those trying times, for a soldier's family to follow him around with the various movements of the Army. The chronicles of that town record that after the removal of the army hospital to Lancaster, whither the convalescent surgeon went also, his family resided in the village of Lititz for 10 months. The author of these chronicles, a few days after the last patients had been removed, wrote that Dr. Alison, who had been in charge of the hospital located there for over ten months maintained order and discipline to the best of his ability.

[3] *Penna. Mag. Hist. & Biog.* 1899, Vol. 23, p. 293.

Courtesy of the Presbyterian Historical Society, Philadelphia, Pa.

When Dr. Alison was attacked in the epidemic of putrid fever which broke out at Lititz soon after his arrival, his associate there was also stricken, so that the village physician, Dr. Adolph Mayer, took charge until relieved by a Saxon doctor, probably Dr. Suken. At the Historical Society of Pennsylvania is an autograph letter that Alison wrote to a Mr. Yates concerning an accident case and mentioning Dr. Mayer of Lititz and Dr. Suken. Dr. John Adolph Mayer (or Meyer, as he is sometimes styled), who relieved the surgeons in charge of the Continental Hospital for the first 10 days, was also a native of Saxony. He was born March 15, 1714, licensed to practice in August of 1732 and in 1742 came to Pennsylvania where he continued his profession in Bucks and Lancaster counties, to a few years prior to his death at Lititz, October 6, 1781. He was married in Philadelphia in 1745 to Justina Kraft.[4]

In a communication of Director General Dr. William Shippen, Jr., dated at West Point, December 15, 1780, the list of Dr. Alison's services during the Revolutionary War are set forth as follows:

Concord Church and Meeting House, in the vicinity of the field of Action, Brandywine,

Philadelphia, had charge and removal of wounded officers to —— Burlington and Bristol, where he attended them 'till ordered to the ——

Ship Tavern in Chester County, to remove the wounded of General Wayne's Division Massacred at the Paoli, to the town of ——

Lancaster, at which place he remained until notified to repair to

Falkner's Swamp, to take charge of the wounded of Germantown battle, left behind on account of the violent inflammations. After three weeks he conveyed them agreeably to instructions to the town of

Reading where he dressed said men till the beginning of December.

Plumstead Meeting House in Bucks County he proceeded to immediately after and retreated with the sick of said Hospital to Lititz in Lancaster County, Agreeably to His Excellency's orders December 19, 1777, and remained there 'till the latter end of August 1778.

In September was obliged twice to attend in Philadelphia to settle Hospital Lint Accts.

[4] Ib. 1900, Vol. 24, p. 245.

New Windsor, in the Eastern Department, he was ordered October 20, and left February 12, 1779.

At Sunbury, on the Frontier of Pennsylvania, he was ordered the beginning of May to erect Hospitals for the reception of the sick and wounded of General Sullivan's Army. The 28 of May 1780, he received instructions to repair to Headquarters—June 8 he arrived in Philadelphia.

August 25, received orders to repair to Camp and take charge of a Hospital in its vicinity.

Prior to entering the hospital service, Dr. Alison was commissioned surgeon of the 12th reg't. Penna. line.[5]

In a report found at Washington, D. C., Jordan also found Alison's name on a list of the medical officers at the Bethlehem Hospital. Here, and later at Lititz, Dr. Alison was closely associated with Dr. William Brown, of Virginia, who completed his pharmacopeia at this time—the first published in English in the United States.

After the disaster at Germantown, a part of the wounded were first treated at a place called Faulkner's Swamps, but their wounds being in bad condition, about November they were taken to Reading by Dr. Francis Alison. Here he had to attend 38 sick in the Court House Hospital, 20 in the Bunkhouse and 9 in the Potter's shop, as well as several female patients, wives of the soldiers. Some idea of the deplorable conditions with which Alison had to cope in these so-called hospitals can be gleaned from the heart-rending reports of Benjamin Rush who so actively fought for improvement in the sad plight of the sick and wounded. From Bethlehem, he wrote: "While I am writing these few lines there are several brave fellows expiring within fifty yards of me from being confined in a hospital whose air has been rendered putrid by the sick and wounded being crowded together."[6] Not only was it difficult to obtain food and clothing, but the elementary necessities for ordinary cleanliness and hygiene were sorely lacking. Requisitions like the following give striking testimony to such wants:

[5] Jordan, John W., "Continental Hospital Returns," *Penna. Mag. Hist. & Biog.*, 1899, Vol. 23, p. 35, and p. 210.

[6] Goodman, Nathan G., *Benjamin Rush, Physician and Citizen.* Phila., 1934, p. 91.

F. Alison

THE GENERAL

PRACTICE of PHYSIC;

Extracted chiefly from the

WRITINGS

OF THE

Moſt celebrated Practical PHYSICIANS,

AND

TRANSACTIONS of the LONDON COLLEGE, MEDICAL ESSAYS, and MEMOIRS of the Learned ACADEMIES in EUROPE.

To which is prefixed

An INTRODUCTION,

CONTAINING

INQUIRIES relative to the PATIENT,
Of diſtinguiſhing one DISEASE from another,
Of the PULSE,
Of the Conſent of the NERVOUS PARTS,
Of OBSTRUCTIONS, &c.

Multum egerunt qui ante nos fuerunt, ſed non peregerunt: Multum adhuc reſtat operæ, multumque reſtabit, neque ulli nato poſt mille ſæcula præcidetur occaſio aliquid adjiciendi. SENECA.

By R. BROOKES, M. D.

In TWO VOLUMES.

The SIXTH EDITION,
With conſiderable ADDITIONS and IMPROVEMENTS.

VOL. I.

LONDON,
Printed for T. CARNAN, and F. NEWBERY, Jun. at No. 65, in St. Paul's Church-Yard.
M DCC LXXI.

Francis Alison Junr. Novr. 1771

Fig. 3.

A book from the library of Francis Alison, Jr., in possession of the author.

"A few articles much wanted at the hospital" (at Lititz), "which Mr. Malsly informs me he brought from Bethlehem and left in Reading.

"6 Large Washing Tubs
2 Large Iron Pots
4 Dozen Wooden Bowls
1 Dozen Brushes (sweeping)
Chamber Pots
Combs, etc.

"We have never been supplied with these things, consequently stand in great need.

"You will please send by the same wagon, the sugar and tea you were so kind as to promise me.

Your very humble servant,

FRANCIS ALISON
Senior Surgeon

"P. S. Dr. Brown presents his compliments to you and will also thank you for some tea and sugar." [7]

Yet, when the Rush-Shippen controversy was raging so furiously in the spring of 1778, Shippen solicited statements from some of the medical officers in the hospitals, and Dr. Francis Alison, Jr., writing from Lititz on April 14, 1778, said, in brief:

"I have supplied the place of a Senior Surgeon in the middle division since August 1st and during that time I have never known sick or wounded to be served with adulterated wine; neither did they lack stores and much attention was paid to them by Dr. Shippen." [8]

Among the Alison Papers preserved in the manuscript division of the Historical Society of Pennsylvania at Philadelphia is a group of Autograph Documents listed as the Continental Hospital Returns, 1777-1778, which constitute official reports of sick and wounded revolutionary soldiers under the care of Dr. Alison and others during this period. These returns were published in full by John W. Jorden [5] who also wrote an extensive and lucid account of "The Military Hospitals at Bethlehem during the Revolution" culled from the diaries of the Moravian Congregations of those towns.[9] A tablet

[7] Gibson, James E., *Dr. Bodo Otto and the Medical Background of the American Revolution.* Springfield, Ill., 1937, p. 164.
[8] Ibid., p. 227.
[9] *Penna. Mag. Hist. & Biog.*, 1896, vol. 20, p. 137.

marking the site of the military hospital was erected at Bethlehem in 1897 in memory of the soldiers who died there.[10]

It is interesting, too, to note from these returns, that there were nearly always some female nurses at hand to assist the physicians.[11] At first the regulations provided one nurse to every ten sick, at one-fifteenth of a dollar per day, or two dollars per month, and a matron to superintend the nurses and bedding, etc. Nurses were required to attend the sick and obey the matron's orders.[12] These regulations pertaining to nurses were later changed and modified.

Following is a summarized list of these hospital reports: (Fig. 4).

1. Return of the Sick and Wounded in Lititz Hospital from Jan. 12 to 22nd, 1778.

A total of 173 admissions of whom 1 was discharged, 12 died, 2 deserted, while the remainder were listed as follows: 1 wounded, 89 convalescent, 4 Intermitt. (intermittent fever), 3 Lues Vener., 8 Rheumatism, 12 Pleuritis, 25 Putrid Fever (probably typhus in many cases), 11 Psora, 4 peripneum, 1 hernia.

2. List of Sick and Wounded in the Hospital at Plumstead December 10, 1777, a total of 40, of whom 2 died, 10 were discharged, 28 remained. The diseases listed were: Inflam. Fever 8, Cough 1, Peripneumon 3, Diarrhea 6, Pleuritis 7, Convalescent 6, Rheumatism 2, Putrid Fever 3, Pain in Ear 1, Venereal 1, Intermittents 1, Wounded Thumb 1.

3. Return of the Wounded Belonging to Different Regts. etc. in Lancaster 11th Oct. '77 (from General "Wain's" Division at Paoli).

4. Return of Sick 1st Regt. November 9, 1778, in the hand of and signed by Miles King, Surgeon.

5. Return of Sick, October 23, 1778, signed by Miles King.

6. Return of Sick, November 19, 1778, unsigned.

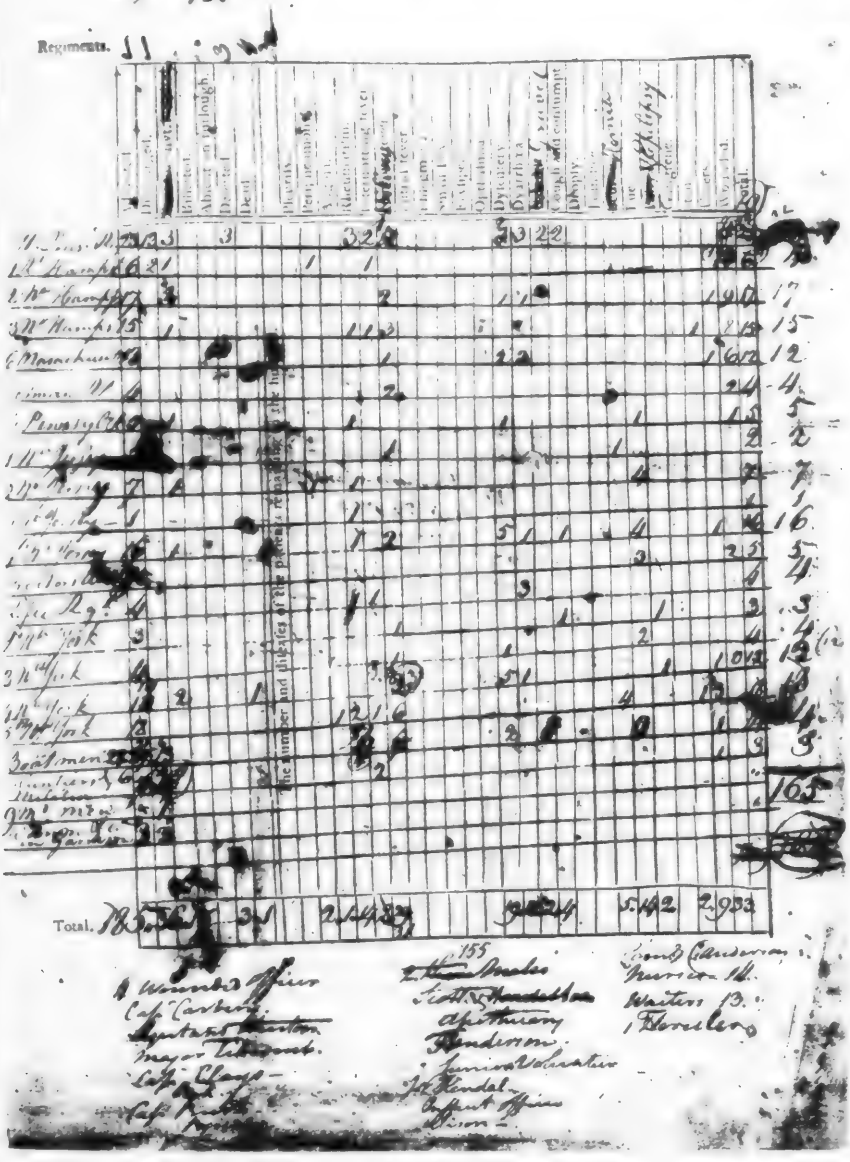
7. Another Return undated and unsigned.

[10] Beck, James M., *Unveiling of a Tablet at Bethlehem, Pa.*, June 19, 1897, Pa. Soc. Sons of the Revolution, Phila., 1897, p. 107.

[11] Duncan, Louis C., *Medical Men of the American Revolution.* Carlisle Barracks, Penna., 1931, p. 224 et seq.

[12] Toner, Joseph M., *Medical Men of the Revolution.* Phila., 1876, p. 34, note 2.

A [illegible] RETURN of the Sick and Wounded in the [illegible] Hospital at Sunbury from the 21st Inst to the 22d of Sept 1780



8. List of Capt. Reed's Company with a list of the sick. Unsigned.

9. Roll of Sick 14th Virginia Regt. November 19, 1778.

10. Autograph Note requesting admission of two sick soldiers, November 28, 1778.

11. Return of Sick sent from Robinson's to New Windsor signed by B. William, Surgeon.

12. Return of Sick belonging to the 8th Virginia Regt. signed by Hugh Martin, S. M. (Surgeon's Mate).

13. A similar return signed by Charles Greer, S. Mate.

14. A note ordering a soldier to the Hospital.

15. Return of Sick of Delaware Regt. signed by John Platt, S. Mate, D. Regt.

16. A note admitting a soldier to New Windsor hospital addressed to Doctor Alison, Superintending the Hospitals, New Windsor, signed by John Ross, Assist. Surg.

17. List of sick men brought to New Windsor Hospital by order of Gen. Muhlenberg, November 28, 1778.

18. Return of Sick of the Second Maryland Regt. signed by Jos. McCallmont, Surg.

19. Return of Sick of the 6th Maryland Regt. signed by W. Warfield, A. S. (Assistant Surgeon).

20. Return of Sick of the 5th Maryland Regt. signed by William Kitty, Surg.

21. Return of Sick of the 7th Maryland Regt., signed by H. Sabbs, Surg'n.

22. Return of the 6th Maryland Regt. signed by W. Warfield, A. S.

23. Return of Sick of the 1st Maryland Regt. signed by the Captain for Want of Doctors.

24. An unsigned note requesting the admission of a patient.

25. Another.

26. Sixteen Weekly lists of Sick and Wounded in the General Hospital at Sunbury.

After the war was over Dr. Alison returned with his family to his estate at Chatham, in London Grove Township, Chester County, Pa., where in addition to his medical practice he became a fairly successful gentleman farmer. He had eight children, one of whom, his namesake, died at the early age of fourteen. Another son, Robert was graduated in medicine from the University of Pennsylvania in the class of 1819. When his brother, Dr. Benjamin Alison, an early American graduate in Medicine (Fig. 5), who also saw active medical service throughout the Revolution, died, he left Francis as executor in his will. At the Ridgeway Library of Philadelphia there is entombed among the manuscript collections a holograph petition of Francis Alison, Executor of Doctor Benj. Alison, Dec'd. addressed to the Senate of the Commonwealth of Pennsylvania stating that the deceased had furnished sundry supplies and medicines in Northumberland County in 1775 and petitioning payment for the same. The letter was read in the Senate January 13, 1791, and ordered to lie on the table.

Near the close of the Revolutionary War, the Legislature of Pennsylvania passed an act for procuring an estimate of the damage sustained from the British troops during the War. Dr. John Davis, of Tredyffrin, had all his medicines, (of which, from the inventory, he appears to have had quite a full supply), taken in order to replenish the army medicine chests of his Brittanic Majesty. From London Grove Township Dr. Francis Alison, styling himself late Senior Surgeon, General Hospital, claimed as his share of damages £ 451-7-6, a considerable fortune, indeed, for that impoverished post war period, could it ever have been collected. (13)

Dr. Alison died on May 11, 1813. His will, posted, at the County Court House at West Chester, Pa., on April 4, 1813, gives some insight as to his situation up to the time of his decease.

"I, Francis Alison of the Township of London Grove in the County of Chester and State of Pennsylvania, Dr. of Physic and Surgery Considering the uncertainty of this transitory life do make and declare these Sureties to Contain my last will and testament, that is to say: I give and bequeath unto my beloved wife, Mary, in Liew of her Dower, all the profits of the farm on

[13] Futhey, J. S., and Cope, Gilbert, *History of Chester County, Pa.*, Phila., 1881, p. 106.

Omnibus ad quos præsentes Literæ pervenerint

Hen. Procfectus Vice-Procfectus et Professores Collegii et Academiæ Philadelphiensis

Salutem

Scitote me Benjaminem Alison

Baccalaureatus

Gul. Smith S.T.P. Collegii et Academiæ Prof.

Benjaminem Alison

An early American Medical Diploma. The M. D. could be obtained only after three years of active practice.

Courtesy of the Presbyterian Historical Society

which I now reside with all the Stock and farming Utensils now thereon during the term of her widowhood. To my son Oliver I bequeath all my books that are not professional, to my Son, Robert, I bequeath all my medical Books, Medicine and Instruments. I do hereby order and impower my Executors hereinafter named to Sell and Convey all the lands I may be posessed of at my decease on the Youngheagany River or Elsewhere Excepting my lands Situate in the township of London Grove and Londonderry, the Amounts of which Sales I do order to be Equally divided among my two Sons, Oliver and Robert, and my Daughters Rachel, Louisa and Julia—Unto my Daughter Sarah Adams the sum of One Dollar as her share of my Estate in full."

Dated May 9, 1813 (two days before his demise).

Thus died the man. His chief claim upon our memory rests in the fact that he had served his country faithfully during the days of its birthpains. So far as I can at present ascertain, he left no written mark upon the annals of medicine. But oblivious to all the turmoil and political intrigues rife at the time in the medical department of the Continental Army, he served his fellow men faithfully and constantly and to the best of his abilities. No more can be asked of any man.

HISTORICAL BACKGROUND OF THE TREATMENT OF PLACENTA PRAEVIA

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The barrenness of ancient medical literature on the subject of placenta praevia seems remarkable if not incredible. That such an alarming condition did not attract the attention of the ancient writers on midwifery warrants an explanation, which becomes evident from a closer examination of their extant contributions.

In the Hippocratic age the entire domain of obstetrics was in the hands of midwives, so that the only writings of the ancients upon midwifery which bear the stamp of authenticity are those referable to surgical interference. The male practitioner was seldom called by the midwife, save in instances of extreme dystocia. In these cases he invariably resorted to the extraction of the child, a procedure which was considered in the surgical field and which necessitated the use of instruments such as sharp hooks or even more destructive devices. This dominion over obstetrics by midwives which prevailed well nigh into the sixteenth century might explain in a measure the scant extant literature and the lack of exact knowledge on this subject. A careful examination of the pertinent literature indicates that the recognition and effective treatment of placenta praevia belong to a modern age. However, it had been known from the earliest times that the afterbirth was not infrequently found presenting at the os uteri.

The genuine and apocryphal writings of Hippocrates (460-370 B. C.) contain brief and vague references which a vivid fancy might interpret as referring to placenta praevia. In *De Superfoetatione* is the following remark, "if a great flow of blood without pain occurs to the parturient woman before the birth of the child, there is great danger that the child may be born dead or of low vitality," * and again in the *De Morbis Mulierum*, "that if the placenta is delivered before the child, the latter is in danger, as it cannot receive the nutriment which comes to it through the placenta."

Hippocrates proved so great a genius that his teachings domi-

* See Bibliography.

nated medicine for many a century, well beyond the close of the Renaissance. During this period, the real contributions to medicine were all too few. The contributors included Herophilos and Erasistratos, the originators of human dissection; Celsus, that Roman gentleman and humanist; the Ephesians, Rufus and Soranus; and the Byzantine medical compilers, Aetius of Amida and Paulus Aegineta. Despite the value of their contributions, however, there is not a single notation referable to placenta praevia. During the Middle Ages obstetrics still remained outside the pale of the physician's practice; consequently, only occasional references on this subject appear in the medical literature. However in the tenth, eleventh and twelfth centuries there began to appear some obstetrical items culled from the texts of Soranus of the second century and from Paul of the seventh century. These texts preserved the fragments of Greco-Roman contributions to obstetrics. With the dawn of the Renaissance, the revival of learning swept through Italy and the rest of Europe with tremendous force. The medical students gathered around the Universities of Padua, Bologna and Ferrara. It was the age of Vesalius and his several able pupils, Gabriele Fallopius; Fabricius of Aquapendente, Realdo Colombo and Bartolomeo Eustachio. Again it may be noted that the practice of obstetrics was entirely in the hand of midwives who, for the most part, were ignorant, superstitious followers of routine procedures.

The first popular Renaissance text on obstetrics was published at Worms in 1513. It was written in German by Eucharius (Roesslin), at the suggestion of the Duchess of Brunswick, and was entitled "The Garden of Roses for Pregnant Women and Midwives." It was not an original work but rather a compilation of the teachings of Hippocrates and of Soranus, as they had filtered through the codices of Moschion. Aetius, Albertus Magnus (Albert von Bollstadt) and G. Michele Savonarola. But it did bring to light the almost forgotten practices of ancient Greek obstetricians, and though badly contaminated with medieval superstitions, it served as a reference book on obstetrics throughout the continent. The first English edition was a translation with additions by Richard Jonas in 1540. The second edition, revised by Thomas Raynalde, seems to have had a remarkable vogue, for it was reprinted as late as 1676. Still there was no

mention of placenta praevia. A vague and inconclusive reference to placenta praevia is contained in the work of Jacques Rueff in 1554. He wrote, " if the secundines come forth before the child and impede the exit of the child, it is to be cut away and the cord tied, and the following pessary is to be inserted in the neck of the womb." He preferred cephalic version and was also the first to recommend a combined internal and external version.

The first reference to what may be considered placenta praevia and its treatment was by the famous French surgeon of the sixteenth century, Ambroise Paré (1510-1590). Paré mentioned prolapse of the placenta as a cause of " flooding " and for this serious obstetrical complication, he *advised and performed internal podalic version*. Version had been used by the ancients, but solely for difficult labors, and even this practice had been forgotten for approximately 1500 years. Although Paré's essay on podalic version appeared in 1550, he stated that this procedure had been performed by Nichole Lambert and Thierry d'Hery, physicians of Paris. Pierre Franco, a pupil of Paré, in 1561 advised internal podalic version, but never performed it. On the authority of Jacques Guillemeau (1550-1613), Paré also had the distinction of inducing artificial labor by manual dilatation of the cervix when the mother's life was endangered by " flooding." Guillemeau, a pupil and friend of Paré, told how in 1599 he delivered his teacher's daughter by inducing labor in the manner described for a severe hemorrhage. He added that he had seen Paré perform version twenty-five years earlier. J. Guillemeau supported the then prevailing belief that the placenta became detached from its normal fundal site and dropped to cover the os. He recommended artificial dilation of the cervix and internal podalic version for this lesion and on occasion he removed the placenta prior to delivery.

Louise Bourgeois, who as midwife to Marie de Medici ushered Louis XIII and many another royal infant into the world and of whom W. H. Allport gives us an interesting and entertaining account, published her textbook on obstetrics in 1609. She was the wife of Martin Boursier, " barber surgeon " and army sergeant, and was well acquainted with Paré. This association aroused many petty jealousies on the part of other less fortunate midwives. That Madame Bour-

geois had been instructed by Paré and Guillemeau in podalic version is well known; however, her claim to priority of rupturing the membranes to induce premature labor because of severe "flooding" would appear to be erroneous. For "flooding" she advised immediate delivery whether or not in labor, and she practiced *accouchement forcé* but did not so name it.

The explanation given by Francois Mauriceau (1637-1709), whose text for midwives first appeared in 1668, concerning the cause of the death of the foetus in the presence of "floodings," has a decided Hippocratic tinge. He speaks of a "part of the afterbirth which presented at the os." This fact, if it stood alone, might afford some ground for the belief that he recognized its true character. But if we are guided by the ordinary rules of interpretation of placenta praevia, there can be no doubt that Paré, Guillemeau and Mauriceau did not know the true nature of this entity. There is not the slightest reference to indicate that Mauriceau surmised that the afterbirth was implanted in the cervical portion of the uterus. On the contrary, all his explanations are based upon the supposition that placenta praevia was an accidental displacement of that structure from its normal intrauterine location to the cervical orifice. To Mauriceau, however, belongs the honor of first proposing and adopting the method of rupturing the membranes to control the hemorrhage in placenta praevia. Moreover, he antedated N. Puzos (1743) by fully seventy-five years in his explanation of the principle upon which the treatment acts in suppressing the bleeding.

Paul Portal's notations (1664) on this subject have been a source of considerable controversy among medical historians as to priority and definite interpretation. He described in some detail seven cases and alluded vaguely to six more. In these he recognized clearly that the placenta was attached over the lower segment, and he described how he separated it from the uterus. Moreover he explained the source of the bleeding and the circumstance of its production. His knowledge of this subject was superior to that of his contemporaries as well as many subsequent writers, excelling both in theory and practice. This was a great advance for which historians have thus far denied him due recognition. The fact that his knowledge of placenta praevia was not more widely disseminated, should not impair

his prestige, nor can one fail to note in certain instances the similarity of his technique with that of subsequent writers, who for some reason did not choose to quote their source. Robert Renton (1837) first directed the attention of the profession to the original observations of Portal on implantation of the placenta at or near the *os uteri* and its effect in producing unavoidable hemorrhage. However, Portal's priority in the discovery of placenta praevia is denied by the historian, William Read (1861), for two reasons. Portal recommended artificial delivery in all varieties of " flooding " whether or not it was a praevia and Read cited as further proof that this subject was noticeably omitted in an essay affixed to Portal's work, which appeared in England in 1763. In this essay every species of difficult labor is mentioned except those complicated by " flooding."

Pierre Amand (1691-1706) records eight cases in which " flooding " occurred necessitating immediate delivery. In four of these he distinctly states that the placenta presented. He also was ignorant of their real nature and as Levret has well remarked " passed them by without bestowing upon them that attention they merited." Similarly, Guillaume Mauquest de LaMotte (1655-1737) who based his proof on four case reports, showed that he entertained the same opinion as Mauriceau and his contemporaries in regard to the general nature of placenta praevia. So there is ample justification in a remark made by Levret, " It is truly astonishing that this great practitioner should not have pondered more upon this circumstance."

It remained for the obstetricians of the eighteenth century to differentiate between placenta praevia and premature separation of that organ. Elias von Siebold, overlooking or discounting the claims of Portal, attributed the proof by autopsy findings, that the placenta was implanted on the lower uterine segment, to Gottlieb Schacher, professor of Obstetrics at Leipzig. In 1709, Schacher wrote a dissertation on the autopsy findings of a woman who had died as a result of " flooding." The autopsy revealed a placenta attached to the cervical portion of the uterus, closing the os uteri. The membranes were intact and intimately connected with the whole internal surface of the uterus. In 1715, Johan van Hoorn, who probably was at one time a pupil of Portal, published a manual for midwives in which he said that, " sometimes the placenta, at the beginning of pregnancy, is implanted

upon the mouth of the uterus, whence as soon as the latter opens, the former necessarily becomes detached; and the more it is detached, the greater the amount of blood from the lacerated vessels." A. Petit, (1723) reported the post-mortem findings on the body of a woman who had died from " flooding " near term. He found the placenta adherent to the neck of the uterus, and exactly closing that orifice except at one part where it was detached, and from whence the discharge of blood had taken place.

Johannes G. Roederer (1759) gave a clear account of the symptoms and treatment of placenta praevia. He was well acquainted with the fact that the placenta was firmly adherent to the lower segment of the uterus and he recommended cautious dilatation of the cervix by the hand and delivery by the feet. He had little confidence in the practice of rupturing the membranes to control hemorrhage. In 1730, John Daniel Erhard Brunner wrote his graduation thesis upon the " insertion of the placenta over the internal orifice of the uterus " and defended his views before the faculty of the University of Strasbourg. He pointed out that the placenta might adhere to the os uteri at any portion of its circumference and designated the signs by which this entity might be recognized, either during the late stage of pregnancy or at delivery. He proposed as a remedy the separation of the placenta on the side where it was least adherent, followed by rupture of the membranes and turning of the child. An able surgeon and man midwife of this period was William Giffard, whose *Cases in Midwifery* was published three years after his death (1731) by Edward Hody, M. D. Hody said of Giffard, " He was a plain man, remarkable for an honest, frank behaviour, of strong judgment, skillful, and experienced in his profession." Giffard was one of the first, after the Chamberlens, to use forceps on the aftercoming head. His cases are carefully described after the manner of Mauriceau.

Wherever Giffard obtained his knowledge, he shows that he was aware of the fact that the placenta might be implanted over the *os uteri*. It may be here noted that Giffard's narrative corresponds so closely to that given in one of the cases related by Portal, especially the manner of introducing the fingers into the cervix and through the placenta, that it must be regarded as either a decided coincidence in thought and expression or as evidence that Giffard had access to

Portal's book, without choosing to admit the fact. On the subject of placenta praevia, Giffard made this pertinent remark: "I cannot implicitly accede to the opinion of most writers on midwifery, which is that the placenta always adheres to the fundus uteri, for in this, as well as many former instances, I have good reason to believe that it sometimes adheres to or near the os internum and the opening of it occasions a separation and consequently a "flooding." Certainly Giffard knew the difference between placenta praevia and premature separation of the placenta.

André Levret, in the year 1753, published this *Art des Accouchemens* in which he stated that the placenta is often implanted over the *os uteri,* in which case hemorrhage is inevitable in the latter months of pregnancy; and that the surest way to meet this emergency is to deliver by art; that is, to resort to *accouchement forcé* and turning. Levret does not claim for himself the credit of discovering the nature of placenta praevia; but on the contrary, admits candidly that Portal long before him had described the condition, stripping the subject of all novelty. Levret exerted much effort to advance knowledge on this subject. He was the first to use the term *accouchement forcé* for forcible dilatation of the cervix, and also the first to determine the presence of a praevia by internal exploration of an "attaching tumor" covering the *os uteri* wholly or in part. Levret also believed that the placenta *per se* supplied some of the blood lost in this form of uterine hemorrhage. This view may have influenced Sir James Y. Simpson in his erroneous theory of the source of hemorrhage in placenta praevia in the following century.

William Smellie in 1754 wrote on uterine hemorrhages of the late months of pregnancy but did not differentiate the two entities. However, he made the sound observation that the amount of "flooding" is in proportion to the amount of separation; that gentle dilatation of the cervix, rupture of the membranes, and turning were necessary to control the bleeding. In keeping with his time, Smellie advocated venesection when the "flooding" was mild. He preferred laudanum to ergot as an hemostatic agent.

William Hunter (1774) made anatomical drawings of an autopsy specimen of a uterus containing a placenta covering the internal os. These drawings are said to have directed the attention of the profession to the structure of the pregnant uterus.

In 1775 Edward Rigby published his *Essay on Uterine Hemorrhage,* which covers the subject fully, with vigor and clearness. He was the first to propose the division of uterine hemorrhage into two classes, one of which from its varying causes he termed *accidental,* and the other from the necessity of its occurrence under particular circumstances, *unavoidable.* His claim of being first to establish the sound treatment of placenta praevia is not tenable however, as evidenced by the abstracts made from previous writers. He was antedated both on the continent and in England. But even so, there can be no doubt that with the publication of his text placenta praevia was brought prominently before the profession. With the publication of Rigby's text, all doubt as to the true nature of placenta praevia came to an end. Its history must be considered an integral and most important part of obstetric medicine. Indeed Rigby's essay terminated the controversies on this subject which had prevailed for centuries, only to kindle even more violent controversies over the therapy for this condition.

This essay is limited to an historical review of the evolution of different types of therapy for this lesion. The operation of *accouchement forcé,* as we know it, was an outcome of the great revival in midwifery initiated by Ambroise Paré. *Accouchement forcé* was introduced early in the seventeenth century for placenta praevia by Guillemeau and Louise Bourgeois. It is much older than that however for references to it may be found in the writings of Celsus (first century), Moschion (second century) and Paul Aegina (seventh century), though in no instance for placenta praevia. Occasionally after Guillemeau's time the operation re-appeared; as for example when Levret gave it its modern name. More recent revivals were by J. Clifton Edgar for the treatment of placenta praevia in 1892 and by Philander Harris (1893). The latter reported nine patients with placenta praevia treated by bimanual dilatation of the cervix. Numerous advocates of this form of therapy at one time included such distinguished obstetricians as J. W. Williams, E. P. Davis, F. S. Newell, E. Bonnaire, R. J. T. Meurer and H. Treub. The beginnings of metallic dilatation of the os by branching instruments is lost in antiquity. Mauriceau (1668), F. B. Osiander (1782), D.W. H. Busch (1842), S. Tarnier (1861), H. S. Lott (1879); L. M. Bossi (1889)

employed metallic dilators and innumerable varieties have since then been brought to the professional notice. Metallic dilatation of the os for placenta praevia had few followers and rightly enough many practitioners considered this practice both unsatisfactory and dangerous.

Hemostatic vaginal tampons were used by the ancients, Hippocrates, Theodorus Priscianus (340), Moschion and Paul of Aegina (625-690) for carrying astringent medications into the vagina, but it is extremely doubtful that they were employed to control uterine hemorrhage of the late months of pregnancy. This same distinction might be applied to the use of tampons advocated by N. Roche (1542), A. Paré (1573), Wilhelm Fabry of Hilden (1641), C. Trioen (1743) and Francois Ranchin (1645). It may be mentioned that Frederich Hoffman's essay dealing with the vaginal tampon as a hemostatic agent (1699), seems to have made little favorable impression on the profession. However, William Smellie was an exception, for he noted Hoffman's views and adopted the tampon for arresting hemorrhage in inevitable abortion. Hoffman claimed priority for its use, but Louise Bourgeois (1609) antedated him by ninety years. She stated: " It is when a woman has a hemorrhage out of all proportion to her pregnancy from which she faints, it is necessary to stopper (cork) her with a cloth soaked in oxycrat." This is the same expression used by Paul Portal in 1685.

It is worthy of note that in 1776 Claude P. Leroux, a pupil of Levret, re-introduced and popularized an old method of arresting hemorrhage and stimulating labor by vaginal tamponade. The tampon consisted of linen, flax or hemp dipped in wine vinegar. Only two small strips were inserted into the cervical canal while the real tampon was inserted snugly against the cervix. French obstetricians have given Leroux the chief credit for the hemostatic tampon, but he mentioned it only occasionally in placenta praevia, and granted priority to Hippocrates, Moschion, Roche, Hoffman and others.

The honor for having first used the vaginal tampon specifically in placenta praevia undoubtedly belongs to J. H. Wigand (1798). Wigand stated that he " had never lost a child or mother " by this method. But despite these amazing results, he added that he did not know of a single individual who had adopted his procedure. Sub-

sequently the method was advocated by C. M. Gardien (1807); Mme. Marie-Louise LaChapelle (1821); L. J. Baudelocque (1824); J. V. Scholler (1839); J. A. H. DePaul (1875); P. Cazeaux (1874); Emile Bailly (1873), S. Tarnier (1881) and W. T. Lusk (1882). The tampon was permitted to remain *in situ* until expelled by uterine contractions. By this method the maternal mortality, according to P. V. A. Auvard, was six per cent and the foetal mortality fifty-five per cent. According to A. Dührssen, who made a painstaking historical research, Wendelstadt, the state physician and obstetrician of Wetzlar, was the originator of the uterine tamponade for placenta praevia (1806). L. M. Bossi attributed the discovery to "a certain Morandi," undoubtedly the famous midwife, Anna Morandi Manzolini of Bologna. During this period it may be remarked that Paul Dubois highly recommended ergot as a hemostatic agent in placenta praevia, in spite of distressing results. Indeed he reported a maternal mortality of forty-two per cent. He had a few followers among whom were Robert Lee; F. H. Ramsbotham; F. A. M. von Ritgen, and J. Fountain of Peekskill, N. Y., the latter claiming priority of discovery.

Artificial rupture of the membranes for the management of placenta praevia was introduced in the late sixteenth century, although it had been used centuries earlier solely for the induction of abortion and premature labor. The writings of Aetius of Amida in the sixth century reveal his knowledge of this art. In the latter days of the Roman Empire the practice was very common and was mentioned by Plautus and Juvenal. With the spread of Christianity, accompanied by a growing respect for human life, the practice came to be regarded as criminal. In the hell described in the Gospel of St. Peter special torments are reserved for those who induce abortion. It is not known when or by whom the operation was first used in the birth of a living child through a pelvis of unusually small dimensions.

In the sixteenth century J. Raphael Moxius mentioned the induction of premature labor which he recommended with the object of saving the mother either at the beginning or during the late months of pregnancy (1591). Artificial rupture of the membranes as a method of inducing labor re-appeared at the close of the seventeenth century when it was recommended for placenta praevia by Mauriceau (1668)

notwithstanding L. Kleinwächter's statement, that it had been introduced at a later date (1690) by the famous German midwife, Justine Siegmundin. Induction of premature labor by artificial rupture of the membranes was first employed in England by James Macauley (1756) upon the advice of William Hunter, in order to avoid the distressing mortality resulting from Cesarean operation for contracted pelvis. It became known as the English method of inducing premature labor. Macauley's example was soon followed by many obstetricians including T. Denman, J. Bolton, and S. Merriman. From Great Britain this operation passed quickly to Germany where it was advocated by Franz Anton May of Heidelberg in 1799. It was first put in practice by C. Wenzel in 1804 and a certain Kraus in 1815. Owing to their success and those of F. Reisinger who embodied his results in a pamphlet published in 1820, the measure found a number of zealous advocates. It was performed a number of times in Holland by G. Salomon, J. H. J. Wellenbergh and Schow; in Denmark by P. Scheel (1798) and in Italy by T. Lovati. It was well received in America, Switzerland and Poland but met with firm resistance in France, probably because it was opposed by J. L. Baudelocque, director of the *Maternité*. The French, no doubt, were influenced because of religious and political reasons. However, F. E. Fodéré persisted in recommending premature delivery despite the stubborn opposition of the celebrated Parisian school of obstetrics. It was again proposed by A. Roussel de Vauzesme in 1779 but was not performed in France until 1831, by J. A. Stoltz and in 1834 by P. DuBois. Among the early advocates of this method for the treatment of placenta praevia were F. Mauriceau (1668), J. Siegmundin (1690), H. Deventer (1701), Johan Bohn (1707), P. Dionis (1718), N. Puzos (1743) and Elias von Siebold (1819).

Another form of inducing premature labor and controlling hemorrhage was that of plugging the cervical canal. The Hippocratic school resorted to the use of sponge tents in the vagina for hemorrhage. Hippocrates himself used a sponge soaked in vinegar, and if that did not prove efficacious he dipped the sponge in tar or pitch before insertion. Herman J. Brüninghausen re-introduced the use of the specially prepared sponge which had been utilized by the ancients, into the cervical canal to excite labor pains (1820). The method was

adopted by Karl von Kluge in the same year and later it was used and advocated by E. von Siebold (1822), J. V. Schoeller (1841) and Robert Ellis who used a carbolized sponge (1867). But the use of the sponge proved tedious, inadequate and uncertain and it was eventually displaced by an entirely new apparatus.

The early history of the colpeurynter, or metreurynter: that is bag, had a rather modest beginning. The first author to use an animal bladder in the vagina was Johann J. von Wahlbaum in 1758. He proposed, as a substitute for the tampon or sponge, an animal bladder attached to a syringe, capable of distention by fluid pressure. Thus von Wahlbaum preceded Antoine Rouget of Toulouse by thirty years. This primitive device was utilized by C. M. Gardien (1807), J. H. S. Wellenbergh (1812), Paul Bitot (1823), W. P. J. Schnackenberg (1831), C. C. Huter and D. W. H. Busch (1842), Miquel d'Ambroise and G. V. Stein (1848), H. F. Kilian (1850), A. Mattei (1855) and S. Tarnier (1860). The animal bladder in most instances was smeared with the oil of hyoscyamus and permitted to remain *in situ* until the cervix had dilated. But despite its many devotees this article proved a failure because of its tendency to decompose. In England William Slyman (1849) introduced a double animal bladder into the uterus to control hemorrhage, an idea which appeared to be original with him, while John Machen had advised a single bladder three years previously (1846).

Shortly after the introduction of rubber, Thomas R. Torbock designed a gum elastic air pessary (1838) which was made by John Brown. Torbock advocated this pessary to arrest hemorrhage in placenta praevia. This is the earliest reference to a rubber colpeurynter and it immediately found advocates in Marie M. Gariel (1849) and Carl Braun (1851). Braun's colpeurynter was not unlike Torbock's rubber bag; it was inserted into the vagina and distended by fluid pressure. Among the indications recognized by Braun for its use were ante and post-partum hemorrhage, but he did not specify placenta praevia; nor did P. Diday, who had introduced Gariel's pessary into the uterus to arrest hemorrhage as early as 1849. In 1876 M. de Chassagny substituted a double rubber balloon for his "d'elytropterygoide." It was similar to the pattern introduced by Ralph H. Pomeroy of Brooklyn, N. Y. in 1906.

Inasmuch as the induction of premature labor by rupture of the membranes had been performed in England as early as 1756 and remained an accepted procedure, it was not surprising to find that the rubber bag was introduced *within the uterus* for the same purpose. This was first done by Alexander Keiller at the Royal Infirmary in Scotland about 1857 and two years later by J. Jardine Murray, a former house-surgeon of Keiller. However to Jardine Murray belongs the credit for having first used Keiller's bag to dilate the cervix for the control of hemorrhage in a patient with a placenta praevia. In the same year Horatio R. Storer of Boston independently devised and advocated the use of the intrauterine bag. He was followed in 1861 by E. J. Fountain of Iowa who reported the use of the bag in treating placenta praevia, although Fountain admitted that he had obtained his knowledge from T. Gaillard Thomas. In Germany Maurycy Jelita Madurowicz, an assistant at the Vienna Obstetrical clinic, was the first to utilize the intrauterine bag. Madurowicz, while introducing the bag for placenta praevia, noticed that it had accidentally slipped through the cervix into the uterus. The hemorrhage ceased and the cervix became dilated. He was not bold enough to repeat the experiment or to follow his advantage and it was not until 1888 that it was reported by S. Braun. During the next few years the intrauterine bag was advocated by many authors among whom may be mentioned A. Rodet of Lyon (1866), H. O. Hyatt (1874), M. de Chassagny (1876) and D. Christie (1878) each making some inconsequential modification. Obstetricians of this period experienced considerable difficulty in retaining the bag in place. To avoid this difficulty Robert Barnes, making use of A. Keiller's innovation, introduced his fiddleshaped bags (1860), but shortly afterwards discarded them in favor of those of S. Tarnier who, in the same year, devised a pattern after Braun's which appeared more reliable.

A brief summary of the evolution of the bag begins with the principle of von Wahlbaum (1758) and Rouget (1789), the rubber material to Torbock, Gariel and Braun and its improvement by S. Tarnier (1862), its systematic use by F. Shauta (1883), the addition of traction by Adolph von Maurer (1887), and the introduction of a silk framework and rubber covering by Camille Champetier de Ribes

(1888). But even Champetier de Ribes' modification did not dispense with the cumbersome features of the bag. It remained for James D. Voorhees of New York, an associate of James McLean then director of the Sloan Hospital for Women, to devise an apparatus for intrauterine use that proved both simple and suitable.

The popularization of the Voorhees bag made available a formidable competitor to version. And with the turn of the century, the more frequent use of the bag led to an appreciable drop in maternal mortality rates, but to little improvement in foetal mortality.

The practices prevailing during the first half of the nineteenth century are reflected in the views expressed by Robert Lee and James Y. Simpson. In 1844 Robert Lee said: "The operation of turning, which is required in all cases of complete placenta praevia, is not necessary in the greatest number of cases in which the placenta can be distinctly felt through the os uteri. If the os uteri is not much dilated, the best practice is to rupture the membranes, to excite the uterus to contract vigourously and to leave the case to nature." This was essentially the treatment advocated by Mauriceau and later by Smellie.

In the following year (1845) James Young Simpson began to question the value of *accouchement forcé* and version. Simpson's paper contained a statistical report based on the mortality for placenta praevia under all manner of treatments. He quoted the statistics of Mauriceau, Giffard, Smellie, Rigby, Levret and Lee, and noted a maternal mortality of thirty-three per cent produced by *accouchement forcé* and version. He proposed, as a substitute, the practice of manual detachment and extraction of the placenta, letting the child remain *in situ* to be delivered by the normal process of labor. Simpson's idea of detaching the placenta prior to delivery was not a new idea. It might well have originated with J. Guillemeau (1612), C. Viardel (1671), F. Lossius (1672) or P. Portal (1685), all of whom had performed it in the occasional case. Perhaps it was Levret who in 1776 said that the hemorrhage in placenta praevia was mainly from the placenta. Even G. Trinchinetti (1816), Kinder Wood (1824), Thomas Radford (1845) and James Hamilton (1830), had tried this method before Simpson; and all of them wrote extensively on this subject. Here again questions of priority led to bitter

arguments and recriminations. Simpson in 1845 maintained that the hemorrhage takes place " principally or entirely from the vascular openings which exist on that exposed placental surface," and that the hemorrhage ceases " upon the disseverment of all its organic and vascular attachments with the uterus." Simpson reported a maternal mortality of one in fourteen treated by his method. Robert Lee, in one of his last contributions upon the subject, denounced Simpson's views as to the source of the hemorrhage as " a gross, unparalleled and unretracted blunder." Later Matthews Duncan referring to the Simpson view said: " A theory he elaborately propounded, labouriously defended, and never withdrew. It does not appear susceptible of vindication." Although Simpson's method is one of historical interest, none-the-less it remained as a vigorous plea against *accouchement forcé*.

According to A. A. Auvard partial detachment of the placenta as a method of treating placenta praevia was proposed by Carl Ludwig Frederick Bunsen of Frankfort in 1822 and performed in 1839. On one occasion Bunsen reported removing pieces of protruding, bleeding placental tissue before term; and following the delivery a part of the placenta was found missing. However the originator of this means of therapy was undoubtedly John D. E. Brunner, who advocated it in his thesis of 1730. Claiming originality, Robert Barnes in 1857 re-introduced partial detachment of the placenta from the lower uterine segment, rupturing the membranes, and leaving the labor to nature. This was essentially the method advocated in Germany in 1855 by H. M. Cohen, with this modification. Cohen advised detaching the placenta on the side, pressing it into the os uteri, and then rupturing the membranes. To Barnes belongs the credit for the first description of the function and action of the lower uterine segment in placenta praevia. Barnes reported sixty-nine patients treated by his method. In this series there was a maternal mortality of nine per cent and a foetal mortality of sixty-three per cent, a slight improvement over Simpson's statistics.

A landmark in the treatment of placenta praevia was the introduction of the combined external and internal podalic version, a contribution of John Braxton Hicks in 1860. Although it had been previously suggested by Jacob Rueff (1554) and by John Pechey

(1698). T. Denman (1785), C. Leroux (1776), R. Lee (1844), A. F. Hohl (1845) and M. B. Wright (1854), none of these men described the method in detail as applied to the treatment of placenta praevia. In 1859 Braxton Hicks was invited by his Alma Mater, Guy's Hospital, to accept the post of assistant obstetric physician. The following year, 1860-1861, he published in the Lancet a paper entitled "A New Method of Version in Abnormal Labor." Thus Hicks first brought before the profession his new method of version by combined external and internal manipulation. He based his report on five patients with placenta praevia to illustrate the peculiar applicability of this method of version. The particular advantages of his method consisted in the introduction of only two fingers through the cervix, thus eliminating the pain sequential to a full hand dilatation, minimizing the necessary time and reducing hemorrhage. It stopped hemorrhage immediately, obviating the use of the tampon. Many years elapsed before this method was recognized, but when the profession realized its value, the maternal mortality from placenta praevia dropped from thirty per cent to about five per cent.

In Germany obstetricians rapidly accepted Braxton Hicks' contribution. It became known as the German method and among the early advocates of this procedure were H. Fasbender, M. Hofmeier (1882), G. Behm and Robert Lomer, the latter having been instrumental in influencing American opinion into discarding *accouchement forcé* and version, though they were used as late as 1884, in spite of the unfavorable statistics published by Enoch W. King in 1879.

A real competitor to the Braxton Hicks' method was that of J. Abernathy Willett, who in 1925 recommended the use of a scalp clamp, which when applied to the vertex, with traction added, would compress the placental site and arrest hemorrhage. This procedure was performed with greater ease than a Braxton Hicks version, but it did not lower the maternal or foetal mortality rate. That the knowledge of Willett's clamp was not widespread is evidenced from the fact that C. J. Gauss of Würzburg did not mention it in his article published in 1934, but announced the instrument as something original.

As the nineteenth century closed, obstetricians preferred slow dilatation either by the use of the bag, the tampon or combined

version. But a turning point had been reached. Abdominal surgery, rendered safe by the introduction of antisepsis and later asepsis, assumed a dominant role in medicine. The bold and skillful Lawson Tait, who had astonished the gynecological world by the removal of a pyosalpinx in 1879, and the excision of a ruptured ectopic mass in 1883, shocked his contemporaries by proposing Cesarean section for placenta praevia in 1890, and by performing a Tait-Porro operation for this lesion in 1898. This radical departure aroused a violent storm of criticism and opposition from the conservative obstetrical element which felt that its field had been invaded by the surgeon. Unfortunately obstetricians had not kept pace with the brilliant exploits of surgery and thus found themselves wholly unprepared for an abdominal approach to obstetrical problems. But when the innovation was finally accepted, a new era had dawned and one of the distressing features of placenta praevia had been conquered. The foetal mortality rate dropped approximately thirty per cent. Some of the more eloquent American objectors to Tait's proposal and method were B. C. Hirst, F. S. Newell, H. D. Fry, and R. W. Holmes. These authors maintained that though the earlier Cesarean sections had a maternal mortality of nearly twenty per cent, with the ever improving technique and better selection of cases this figure was gradually being reduced.

The first American to perform a successful Cesarean section for placenta praevia was A. C. Bernays of St. Louis in 1893; the operation being done for a complete praevia. Two unsuccessful attempts had been made previously, one by B. M. Hypes and G. F. Hulbert in St. Louis in 1891 and one by J. M. Sligh in Montana in 1891. A. Palmer Dudley reported a Cesarean section for a complete placenta praevia in 1900 at which time he sounded the keynote of the objections to the use of the bag, tampon and version when he reiterated that the old axiom, " The mother, never mind the child," was being forced into oblivion. Subsequently F. D. Donoghue (1900), C. H. Hare (1900), and P. E. Truesdale (1900), of Boston; W. J. Gillette (1901) and D. T. Covington (1901), of Ohio, performed and advocated Cesarean section for partial placenta praevia.

Joseph B. DeLee in 1904 hesitated about accepting the abdominal approach for the treatment of this lesion. He advised caution in

removing the placenta from the lower uterine segment which had been described previously by Robert Barnes as early as 1860 when he introduced the idea that the lower uterine segment had poor contractibility. Again in 1908 DeLee, writing in a more optimistic mood said, " We always have felt that there is a field for Cesarean section in placenta praevia in spite of the views of P. Zweifel, E, Bumm, F. Schauta, H. Ehrenfest, R. Holmes and others; but the selection of the case will be a personal one not guided by general and accepted principles of treatment."

In Germany the advocates of Cesarean section were H. Sellheim, B. Krönig and H. Dührssen. Sellheim in 1908 and Krönig in 1909 reported eight and six cases respectively of placenta praevia which had been delivered by Cesarean. Sellheim performed the extra-peritoneal and Krönig the classical type of operation and in both instances there were no maternal deaths. On the other hand A. Dührssen, who had begun to perform vaginal Cesarean in 1894, remained a devotee of that method despite the brilliant results of his contemporaries who were adopting the abdominal route. Thus by the beginning of the second decade of the present century there was a definite trend to the low cervical Cesarean, represented by such leading German obstetricians as W. Stoeckel, W. Zangemeister and F. Schilling. Even P. Zweifel, who up to 1906 had stood firmly against this procedure, finally yielded.

Despite these various innovations throughout the century, the greatest single factor in the spectacular reduction in maternal and foetal death rates was the use of repeated administrations of blood. The earlier blood transfusions, haphazard and dangerous, were usually resorted to only in extreme necessity. Between 1900 and 1914 these dangers were gradually eliminated: K. Landsteiner discovered the iso-agglutinins; his pupils A. Decastello and A. Sturli reported a fourth blood group; and J. Jansky and W. L. Moss finally introduced their simple but useful classification. The World War played its part too. The many cases of severe exsanguination on the battlefield made blood transfusion an absolute necessity. These factors paved the way for the universal adoption of one of the most useful and valuable therapeutic measures. Thus placenta praevia, one of the most serious and treacherous complications of obstetrics,

finally lost some of its horror. For two full centuries the profession had lumbered along in a vain effort to reduce its appalling mortality.

That the problem finally reached a solution, was both a tribute to medical endeavor and also as a sad commentary on the sluggishness of medical progress. At the beginning of the eighteenth century (1709) Schacher first recognized placenta praevia as a definite entity. Toward the close of the century (1775) Edward Rigby differentiated it from premature separation. In 1776 Claude P. Leroux introduced vaginal packing for uterine hemorrhage. Vaginal tamponade for placenta praevia was proposed and utilized by J. H. Wigand (1798). Von Wahlbaum and Rouget advocated the animal bladder and in 1838 T. Torbock introduced the principle of the rubber bag improved by Gariel and Braun (1851). Eight years later (1859) Jardine Murray introduced the rubber bag within the uterus specifically for the purpose of controlling hemorrhage. J. Braxton Hicks (1861) deviated radically from this step by the introduction of his well recognized maneuver. Dührssen reported the felicitous use of iodoform gauze (1887). The bag, to which Adolph von Maurer (1867) added weight for traction, found further innovation in the hands of Camille Champetier de Ribes (1888) and James Voorhees (1900). But with the advent of blood grouping and the appreciation of the significance of blood loss, blood replacement and abdominal section gradually came to the front as the method logically indicated a step for which A. H. Bill deserves a full measure of recognition. Thus with the turn of the present century, one more brilliant chapter has been added to the annals of obstetrical therapy.

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ICARIAN MEDICINE

Etienne Cabet's Utopia and Its French Medical Background

Part I

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Introduction

As lack of space does not permit the author to deal with the historical background and the personal development of Cabet's social ideas, nor with the tragic history of the Icarian movement, he will confine himself to mention briefly the high lights of Cabet's biography.

Etienne Cabet, a borrower rather than a creator of ideas, was born at Dijon, France, on January 1, 1788. His father was a cooper by trade. Since he was of a fragile constitution, fond of reading and study, and already affected by defective eyesight which made it difficult for him to handle properly the tools of the workshop where he proved himself an ardent and patriotic worker, his parents decided to make him one of the scholars in whom all the hopes of the French Revolution were devoutly placed.

He had the advantage of receiving a comprehensive training from his celebrated fellow-townsman Jacotot, whose lessons not only made a lasting impression upon young Cabet, but whose revolutionary flair he imbibed. The clairvoyance of the master discovered a choice intelligence in this son of a laborer who was so ardent to learn, and he thought him worthy of becoming his friend.

At every step of his career, Cabet won the sympathy of those who came to know him intimately. Although his life was a continuous struggle, the violence of his pen and of his speeches did not reveal his true nature. More of an infuriated polemicist than brutal, his benevolence and courtesy enabled him to secure the sympathy of his opponents. On the path of life he found trustworthy friends, devoted protectors and loyal followers. The trials he had would have worn out the patience and the resignation of a saint.

When Jacotot presented his young friend with Fénélon's *Télémaque*, he not only immediately enchanted his impressionable mind, but also gave him the first indelible lesson in communism.

Through the medium of a devout vicar who had taken a liking to him, Cabet in his early adolescence was temporarily thrown into a religious crisis from which he duly recovered through the Voltairian medicine of the elderly father of one of his schoolmates.

At the tender age of fifteen, Cabet, whose mental maturity was far in advance of the age of his physical growth, saw himself through Jacotot

suddenly elevated to a professorship. Thinking no calling more honorable than that of a teacher consecrated to the education of the young, he showed his unstinted devotion to scholarship, and amply proved his proficiency in teaching mathematics, astronomy and drawing.

Dreaming for a time of becoming a physician, he actually studied medicine in private; but as medical studies were long and expensive, and as his meager patrimony did not permit him to continue this branch of science, although the information gained was a great aid to him in his future writings, he decided to study law. Again Cabet was fortunate in gaining the paternal friendship of the venerable Proudhon, perhaps the best informed lawyer in contemporary France. He received the license to practice law in 1810, and two years later he obtained his doctor's degree. His first appearance at the bar during the same year proved him well versed in jurisprudence, facile in legal procedure, and a fluent speaker.

With the restoration of the Bourbons, Cabet's political career commenced. He shared the revolt of a liberal France. He successfully took up the legal defence of several patriots, and for the first time tasted the proud sorrow of a man who has to suffer for his ideas. Coincident with the time when almost complete blindness compelled Cabet to retire from professional activities for a while, an administrative order forbade him to practice law for a year. Settling in Paris, he was fortunate in becoming the secretary of Nicod, one of the great jurisconsults of the epoch. Yearning to escape isolation and inaction, he sought in political activity a new lease on life. Through the patronage of his intimate friend Argenson, he became an active member of the secret revolutionary society of the *Carbonari* which had recently been introduced from Naples into France, and soon he was one of its leading directors.

Being only interested in the overthrow of the reigning dynasty, Cabet was an active participant in the July revolution of 1830, heading the popular movement as member of an insurrectionary committee. While the abdication of Charles X was a victory won by the democrats, they were outwitted by the superior adroitness of the royalist leaders. In the effort to conciliate the democratic opposition, the government gave Cabet the post of Procurer-General in Corsica. It erred tremendously in thinking that among the robbers and villains of Corsica Cabet would better understand the spirit of the July monarchy. His diligent efforts at a more enlightened and disinterested administration soon aroused royal displeasure, and he learned of his summary dismissal from the *Moniteur* of May 9, 1831. Though the government viewed with apprehension his secret agitation while in office, the devout patriots of his native district elected him as their chosen candidate in the Chamber of Deputies. Cabet was an independent, incorruptible and honorable public official, a representative who indeed had the interests of the people at heart.

When a bloody insurrection broke out on June 6, 1831, for which the

funeral of General Lamarque served as a signal, the royal ministry accused Cabet of conspiracy, but the court acquitted both him and his fellow-accused. In the spring of 1832 through the publication of a large work on the *Revolution of 1830* in which he related the sundry crimes of the sixteen months' reign of Louis Philippe and his ministers, he forged a new weapon against his enemies on behalf of republican ideas. In purely literary matters Cabet, with the exception of his social utopia, never again attained such a thoroughly complete success. The government, not leaving its adversary to gloat over his tangible victory, had him indicted for attack on the royal person, dignity and rights, and for incitement of hatred, defamation and insults against public authorities; but again he was acquitted. Cabet was not an easy opponent. He continued to play an active role in several republican associations.

It was during the stormy phase of his life in the 1830's that many brochures issued from his pen. It was during these darkest days of French republicanism that there took place a revival of Babeuf's equalitarian communism. Buonarrotti's work on the *Conspiration pour l'égalité dite Babeuf* left a deep impression upon Cabet. He borrowed the most original conceptions from this and Babeuf's works.

By means of a network of laws the government of Louis Philippe continued to persecute its adversaries by severe and discrete repressive measures, far in excess of its constitutional grants. Unable to trap Cabet among numerous other victims by legal means, it sought to render him innocuous by malicious calumnies. Two of his articles in his successful weekly newspaper formed the long sought for pretext for apprehending Cabet. Argout, whom he accused in a sensational speech as being the originator of all the slanderous rumors about him, and the editor of *National* challenged him to duels, both of which did not come off. He was declared guilty, and the penalty imposed was either two years imprisonment or five years exile. He chose the latter. On May 1, 1834, Cabet arrived in England. In his exile, made sufferable by a pension voted him by the shareholders of his newspaper, he profitably devoted his leisure time to the writing of the *Popular History of the French Revolution from 1789-1830*, which while pretentious and unreasonable in its defence of Jacobinism in the eyes of academic minds, was nevertheless acclaimed with great favor by the democrats.

Finally, in 1840, his social utopia *Voyage en Icarie* appeared, the principal merit of which was its translation of the equalitarian theory into a novel *ad usum populi*, and its conciliating of sensitive minds by transforming a rather brutal doctrine into a romantic idyl. The work acted as a magnet about which all the febrile hopes of the masses crystallized. It was a program of social salvation, a gospel for the poor—and its messiah was Cabet. It made a profound and penetrative impression upon the laboring masses. powerfully aiding in the growth of the workers' class consciousness. Cabet's *magnus opus* became the rallying point of the progressively growing Icarian move-

ment of communism; its simplicity rendering it available to less cultivated minds.

What renders Cabet's place of honor among the disinterested characters of the struggling masses particularly interesting, are not the crudities of his communism, the striking defects of his person, nor the defeat of his Icarian experiment in the United States towards the end of the last century, but the energy with which he tried to translate his humanitarian, morally grounded material communism into reality, guided by no other motive than love of the humble masses and love for suffering humanity.

In contrast to the growing revival of ultra-babouvism, Cabet's popular communism was opposed to every form of violent revolutionary activity, since he was convinced that strict adherence to pacific propaganda alone would bring victory to the vision of a genuine social democracy.

Before the fatal outbreak of the February revolution in 1848, the number of Icarian communists had reached a total of two hundred thousand. In spite of its numerical success, its cause was lost in France.

The persecutions of his inveterate foes, the ruling classes and the various rival communistic organizations, not only made Cabet despair of realizing his Icaria in France, but finally drove him from France. His ardent hopes were not advanced by the catastrophic overthrow of Louis Philippe, in which Cabet had taken a prominent share. With his devoted followers he exiled himself in order to build on a small scale his ideal communistic democracy upon the virgin soil of the New World, first in Texas, then at Nauvoo, Illinois, where the first separation occurred, then at Cheltenham, Missouri, then Corning, Iowa, where another division took place, and finally Icaria Speranza at Cloverdale, California. It was not the fervency of his utopianism that caused Cabet's fall. It was the persecutions of a hostile government, the false and malicious accusations of taunting enemies and the pressure of over-anxious friends that constrained Cabet into the sadly famous practical demonstration of his theory. During nine years and at an age when the average Frenchman aspires to retire, Cabet gave body and soul to the colony he founded in a foreign land. And though, after his death in 1856 under sad circumstances, the impetus that he had injected into his work lived itself out in the course of forty years of inner anguish and difficult tests, yet many of his suggestive ideas, even if borrowed in the main, unwittingly continue to make their historic contribution.

Socialistic ideas can be traced to antiquity. In all historical periods there were men who felt that it was neither just nor moral that certain individuals should possess all the good things of life while others were entirely deprived of them. Cabet, too, was one of the social reformers who felt indignant at the injustice of the exist-

ing order. His chief contribution was to devise theoretically what the ideal society should be.

The ideal society which he visioned is, historically, intimately tied up with the humanistic problems of the unity and reason, equality and liberty, solidarity and peace, justice and fraternity, love and truth that ruled the history of occidental mankind for two thousand years or more, notwithstanding qualifications to the contrary. Their absolute stringency and unconditional validity were universally recognized and presupposed in all human activities. Not in the sense of being realized in men. Still less, however, in the sense of an otherworldly existence, since the urge for justice and truth arises from human consciousness and drives man forward from within. The ideal commandments are in men's nature, and aim beyond his nature at something which has no real existence as yet, but which may and should acquire it. The paradoxical character of these basic concepts is that they are not other worldly, but transcend our reality because they are spiritual. The spirit is not supernatural because it arises from and operates within man's nature; but it is more than mere nature, it is human. And as the spirit is one, the ideal forces: fraternity, love, justice, equality, liberty, peace, truth belong together. Nevertheless their seat is not the present world, still less another world. Their seat is symbolized as the Kingdom to come, which is always approaching, yet never attained; it subjects all human activities to its judgment and criticism. The belief in the unconditional claims of these human and spiritual values is the very criterion of occidental civilization. It is the most precarious of all beliefs. Being almost impossible of being lived up to by mortal beings, yet it alone is what makes life human and humane. No wonder that great thinkers made such gigantic attempts to lighten man's burden. Reason appeared to permeate the life of men and society as described by the philosophers of the Enlightenment. Cabet, too, believed with them that man could build up a world of individual and social harmony by following the ideal promptings of reason. Disbelief in the spiritual forces may cast doubt on the necessary correspondence between reality and ideality. But the good, whether realized or not, remains always desirable.

Cabet believed with his whole being that the spiritual forces in

man's nature, constituting as they do his natural goodness, are the elements that make for an ideal collective order. These same spiritual values, rising into human consciousness, are also the driving forces of a new institutional civilization.

Cabet's originality in sketching his social vision of medicine as a goal and inspiration for the society that he knew, has never been equalled among his utopian predecessors and contemporaries. Devout in his communism, the medical needs of the masses could not help but receive serious consideration on his part. Critics may deny him every gift; but none can withhold assent to his no mean medical talent.

To gain a solid appreciation of the ideal magnitude of his social vision of the science and art of healing, it is essential to view it from a general background of the status and organization of medicine and public health of the early decades of nineteenth century France.

Both the medical and legal professions have shared a preeminent position since the Industrial Revolution. The successful physician enjoyed a distinguished social patronage since the days of Louis XIV, at which time the French surgeon owed the improvement in his social condition to the fistula of the august monarch and its successful treatment by Felix.[1] Inherent in this recognition has been the sense that the medical profession exists to perform a public service. It is, according to tradition, a vocation in which public service is more vital than private profit. Behind the status it has acquired is the belief that there is an essential idealism coherent with it.

Ostensibly, the medical profession is outspokenly idealistic, yet the doctor has to make a living by it. Medical service is something very difficult to express in terms of money. Every community has a right to be interested in the welfare of its members, for humanitarian and practical reasons. This necessitates that medical aid be available for everyone, no matter what his social and economic status. It is a stubborn fact that in all ages a system has been sought which would provide society with adequate medical care and at the same time

[1] Garrison, F. H., *An Introduction to the History of Medicine.* (Philadelphia, 1929), p. 393.

compensate the physician sufficiently for the work. Although the ideal has not yet been found, it is in the process of painful maturing. Our age demands a realization of the timeless medical ideal of service on behalf of mankind in accordance with the nature of modern medical science and the type of society that is now existing. The commercial spirit, essentially foreign to the essential nature of medicine, had been thrust upon it by a growing industrial-economic society. It is paramount that the physician be released from the economic sphere into which he does not belong. The socialization of his profession alone will free him from economic restrictions so that he can again pursue his ideals and perform his profession as a servant. As a large number of countries have entered the stage of compulsory and voluntary health insurance as a solution of the social aspects of medical care and medical science, Cabet rightly visions the still more far-reaching step of making the medical services public services available to all without charge, like education and the administration of law. Socialized medicine alone today assures the possibility of retaining the idealism of the medical profession.

The conditions that from the angle of public interest stifle those qualities which go to earn for the medical doctor recognition that the service of the public is an integral part of his vocation, go back to the sixteenth century, when with the development of a new economic order, occidental medicine gradually became a trade. Most modern members of the Hippocratic priesthood dislike to admit this stubborn fact. The trained members of the profession tried to oppose at first the development of medicine as a business enterprise by seeking to become attached to the Court, to the households of the nobility, or other wealthy people. Paracelsus, one of the great doctors of the first half of the sixteenth century, in appraising the famous physicians of his time, already contended " that there are others who care a great deal more for their own profit than for the health of their patients." [2] But while the attempts of the trained medical men, not to be dragged into the new or capitalistic order were unsuccessful, it was not at all surprising to find gibes like that about Lettsom, a prosperous English doctor, circulating:

[2] Wolf, A., *A History of Science, Technology and Philosophy in the Sixteenth and Seventeenth Centuries.* (New York, 1935). P. 427.

"When any sick to me apply,
I physics, bleeds, and seats 'em;
If, after that, they choose to die,
Why, verily! I. Lettsom." [3]

The history of French medicine throughout the lifetime of Cabet seems not to have been without individual writers who called attention to the growing spectre of the transformation of medical practice into a business. The German medical writer, J. L. Casper, in his very informative and decriptive analysis of French medicine in the second decade of the nineteenth century, outspokenly declares "liberty of trade," or competition, as wholly detrimental to the medical art.[4] Again in the fourth decade a socially enlightened French physician at some length deplores the misfortune that the medical doctor considers his profession as a trade, his patients as a merchandise and as objects of exploitation. He, too, is certain that the profit motive is one of the main factors in the gruesome neglect of public health.[5] Money has often played an important role in retarding progressive cultural changes.

A superficial study of the history of medical fees already indicates how increasingly medicine definitely followed the lines of trade. In the eighteenth century there were not a few doctors who became prosperous. Most of those who became metamorphosed into bankers were court physicians, who also received public honors. Quarin enjoyed a pension of $10,000 for his consultation with Joseph II; Fothergill made 5000 pounds a year and Lettsom 12,000 pounds. Dimsdale in the employ of Catherine the Great reached the all time high reward of 12,000 pounds, a yearly pension of 500 pounds for life, with 2000 pounds extra for traveling expenses.[6] In France during the Napoleonic wars a cabinet consultation or a city visit was *ten sous*. By 1853 it was one franc. Bloodletting, an almost undisputed universal therapeutic measure, was one *livre* and a

[3] Wolf, A., *op. cit.*, p. 429.

[4] Casper, J. L., *Charakteristik der Franzoesischen Medizin mit Vergleichenden Hinblicken auf die Englische.* (Leipzig, 1822). P. 510.

[5] Delasiauve, *De L'Organization Médicale en France Sous le Triple Rapport de la Pratique, des Établissements de Bienfaisance et de L'Enseignement.* (Paris, 1843). p. 8.

[6] Gantt, W. H., *Russian Medicine.* (New York, 1937). P. 62.

delivery twelve *livres*.[7] Casper writes that the French doctor's fees in the twenties of the last century varied from province to province. He found the cost of consultation varying from ten francs to ten *Louis d'or*. Besides, if the doctor were not paid properly, he was able to have recourse to law. In England, the same author reports, they paid in gold even for medical service, thirty guineas for a child delivery and one hundred guineas for an amputation in the higher social strata.[8] Delasiauve, in close scrutiny of the medical organization in France, held the profit motive partly responsible for the evident growth of quackery. He expostulated against the dishonorable arbitrariness in the tariffs of medical service and medicines.[9]

There were few studies of medical fees during the life time of Cabet. Notwithstanding the fact that there were professional leaders who sought to stem the tide of making out of medical practice a business, the *laissez-faire* social philosophy forced medicine with the other professions to be thrown open to unrestricted competition. As a sociologist I am prepared to admit that not a little of the responsibility for the present state of threatened chaos in medical, educational, national and international affairs rests upon the shoulders of those who formulated the dubious hypotheses of classical economics. The founders of modern economic science constructed an entire social philosophy upon the dubious assumption that self-interest is the dominating drive in individual behavior and that if allowed complete freedom to obey the dictates of his own self-interest the individual will always behave in a manner most conducive to his own advantage and that of the community. From this primary assumption they deduced the conclusion that the interests of the individual and of society in general are identical. Beyond the individual, it was alleged, there is an invisible benevolent hand invariably guiding him to embrace pleasure, avoid pain and conduct himself to the advantage of all mankind. These basic assumptions entered largely into the foundations of nineteenth and twentieth century economics, politics, jurisprudence and education.

During the nineteenth century, the physician, powerfully influenced

[7] Garrison, F. H., *op. cit.*, p. 752.
[8] Casper, J. L., *op. cit.*, p. 46-47.
[9] Delasiauve, *op. cit.*, p. 73.

as he was by the synchronous industrial movement, became more and more impersonal, increasingly developed into a special type of businessman, and was less and less influenced by social and ethical obligations. In some of the European countries until late in the nineteenth century, the doctor did not send out bills but received what the patients thought fit to pay or were able to send him. Particularly, the French provincial country doctor sedulously nursed his good reputation by not relishing being paid for his services and attending the poor for nothing. If today the majority of the medical profession is still preserving a high moral standard, it is the result of traditions which originated in the pre-capitalistic era.

We can all think of physicians, from the humblest rural practitioner to men like Osler and Koch, whose devoted service to mankind is part of the glory of our times. But it is woefully inadequate to judge the medical or any other profession by the splendid achievements of its men of genius. Rather we must inquire into the main general feature of the contribution written into our daily life, and seek to relate that feature to the goal which the profession is supposed to serve. Today, as in Cabet's day, the public interest is jeopardized by the competitive or business nature of the medical profession. The situation is all the more anomalous on account of the tragic discrepancy between a technically splendidly equipped Western medicine and an inexcusable social backwardness of medical service.

The intense struggle of the average medical man to win and to hold a practice, especially when he lacks private means; the observance of certain professional conventions, such as the unnecessarily complicated relation between the general practitioner to the specialist; and lastly, the conflict between medicine and osteopathy and chiropractice, which the profession has fought in order to safeguard its own monopoly of the right to practice, together with the absence of any coherent relations with the dentist and the psychologist, and the relation of the profession to the proprietary products in drugs, especially in the patent medicines, are striking examples of a deficient public mindedness. Then there is the unwarranted difference in the medical treatment of the rich and the poor. Defective standards of housing, of wages, of hours of labor, with the toll they take of the

population, far too infrequently provoke any organized expression of medical protest. The modern doctor's social opinions tend to be less an inference from the plain lessons of his medical experience than expressions of his class environment. Hence it is not at all surprising that in the field of public health the pressure for great social reforms has too often come from without the profession. The notable thing about some of the outstanding issues of our time, such as the abolition of slums, the equal rights of the poor to the benefits of medical care, birth control information, the vast sex hygiene in schools, the standard of relief in relation to nutrition of the unemployed, the relationship of social diseases to social and economic conditions, *etc.*, is the absolute absence of any coherent civic sense of the medical profession as a group.

Obviously, medical practice is intimately related to public well-being. Its purpose cannot be fulfilled so long as its priesthood is dependent upon the disconcerting hazards of the commercial market; as long as it is a mere dependency of the all-devouring business empire. It is the sorry commercialization of the medical profession that robs it of its sense of urgent obligation to the public which could effect the radical reforms that are long overdue.

Both Cabet as well as Soviet Russia agree in their contention that the individualistic organization of the medical profession is fatal to the fulfillment of its function. It was in 1864, eight years after Cabet's passing that Alexander II of Russia was instrumental in making the first attempt to organize medicine as a public service on a large scale. The *Aptekarsky Prikaz*, whose duties were the supervision and sale of drugs, and originally exclusively designed for the Tsar's family, was established in 1620. This board of apothecaries was abolished by Peter the Great in 1716. Instead he successfully united all the medical departments in a *Collegium Medicum* under an *archiater*, the chief of the pharmaceutic chancellery. Bureaucratic domination retarded medical development until the foundation of the *Zemstvo* in the middle of the nineteenth century.

There being nothing similar in Western Europe, the *Zemstvo* was the first large scale effort at socialized medicine. Although it had received a bad medical heritage, its hospitals were unexcelled in the world before the World War. Representing a revolutionary step

in Russian medicine, it experienced almost constant government opposition.

Zemstvo medicine paved the way for Soviet medicine. Out of its organization evolved later the public health organization of the Soviets. It taught the masses to expect free medical treatment. It stressed public health, sanitation, prophylaxis, and encouraged the spread of cultural interests. Its shortcomings were those of the socio-economic system under which it labored. From 1914 to 1916 the *Zemstvo* organizations heroically kept down the epidemics. During the World War they carried on much of the sanitary work that the government was incapable of doing. Soviet public health organization " derived from England its prophylactic character, from Germany its medical insurance and a class organization, and from the *Zemstvo*, the principle of free medicine to all." Although Drs. Gantt and Sigerist are not blind to the disabling factors of Soviet medicine, they both grant that the tremendous progress made reveals now " a clearly outlined society moving along definite lines toward a set goal." [10]

A still earlier experiment in socialized medicine was in the German Duchy of Nassau in the year 1818, all efforts of which Cabet was doubtless ignorant.[11]

The medical profession cannot give its best to civilization so long as its members offer their services for private hire and sale. It can serve the public in a full degree only as it is organized as a public profession. As long as the motive of personal gain is the primary basis of its activities, the true goal of the profession becomes subordinate to it. Whereas the sickness of our acquisitive society poisons every profession in which the principle of disinterestness should be paramount, the society visioned by the utopian Cabet is one in which the economic transformation has been of such a beneficial nature that all professions and vocations can function for the public good. Unlike our capitalistic society, in Icaria the medical doctor is free from the pressure of business competition and is fortunately

[10] Gantt, W. H., *op. cit.*, pp. 34-35, 58, 63, 81-82, 87-88, 166, 168, 175-177, 196; Sigerist, Henry E., *Socialized Medicine in the Soviet Union.* (New York, 1937). Pp. 66-77, 81, 143, 147, 208, 277, 279, 307.

[11] Sigerist, Henry E., *op. cit.*, p. 76.

enabled to combine the functions of the scientist and citizen. Icaria vividly exemplifies the fact that so long as the main motive is making profit for private gain, the professions are prevented from doing what they claim they aim to do.

Cabet correctly sensed that science and technology are the driving forces that transform both society and medicine. Icaria is a country where the machine does not enslave but serves man, where science is ecstatically adored, where its progress is applied to life immediately for the benefit of the people. This is only possible in some kind of integral socialistic order where the private profit motive is curbed and canalized into socially higher directions. The concurrent development of science and technology calls not only for a new medicine in a new society; but it is bound to give rise to new forms of medical services.

The experts rightly tell us that the technology of medicine has outgrown its sociology. The means by which the existing medical science is translated into concrete measures for the treatment of the sick, and the prevention of illness call for a medical service on a collective scale. The logic of medical science itself dictates in the end its sociology.

The socialization of medical services, the national organization of such services, is the inevitable consequence of the industrialization of the world. As the economic influences have become paramount in the last century, as scientific progress made for greater costs through necessary professional specializations, and as the conditions and ideals of an increasing urban environment have left their mark on the healing art, the development of collective forms of medical service were unavoidable.

Moreover, we must realize that modern medicine is a product of western civilization, and in particular of the industrial technology of the past century. While in almost every decade since 1850 new discoveries and improvements were contributed by practicing salaried physicians and by many who were not physicians, such as chemists, biologists and physicists, and since around 1900 basic medical advance stemmed from research centers, large universities, foundation-supported research institutions, large hospitals and by government, modern medicine has outgrown the capacity of any single

individual or any single professional group either to know or to administer. Today, the sanitation of dwelling places, the protection of mother and child, the care of tuberculosis and mental patients, the hospitalization of the indigent, are tasks of such magnitude that they cannot possibly be carried out in an unorganized way, without the power and scope of the state.

In sharp contrast to the capitalistic economy, the medical service in Icaria is not performed in a haphazard and irrational way. Under our economic system medical care is administered to the people by different agencies in various ways. Private medicine, insurance medicine, charity medicine and state medicine exist side by side. There is not only no coordination in the organized fight against disease on the part of the multitude of staffs; but the absence of a unitary direction by one all-inclusive medical staff, is responsible in no small measure for the inexcusable deficiencies of our medical services.

Cabet happily anticipated the great change of attitude towards public policy which since the eighties of the last century has come to characterize political thinking. The contrasting conceptions of the state as a public service and as a public authority was chiefly worked out by French writers upon law and government. Since then the conception of the state as a public service has moved forward. The art of government now consists in an organization of various essential services. The state no longer exists merely for the maintenance of order, but it exists now for the promotion and advancement of civilized life by the organization of common action among the people. This new attitude towards government implies a conception of such services as those of public health and education, which is quite different from the view dominant in the last century. The organization of public health was first introduced as " charity " for the poor. It was seriously believed that the rich people provide their own drainage and water-supply, and the state was called in merely to help the poor. The organization of health was regarded, and is, perhaps, still so regarded by many, as a charity to the poor. The system of so-called voluntary hospitals and a medical service dependent in its higher branches on large fees from the rich, while medical students are trained by practice upon the poor under the

guidance of unpaid specialists, all this is a survival of the governing conception of a society in which the pursuit of private wealth is excused if some crumbs fall to the poor. The social services in general are still held by those who maintain ancient privileges as contributions of the rich to the maintenance of their dependents, and the superstition still survives that the benefits derived from such services accrue to the poor and not to the community at large.

The way forward, moreover, depends upon the guidance of the conception of the common good. From this point of view, public services are neither charitable nor compensations for the maintenance of injustice. They represent the creation of a new form of the art of government. The state system thus becomes an organization of the energies of all for the common benefit of all. The chief purpose of the state is therefore not in the use of force for the correction of crime or defense against other states, but in better organization of production and distribution, of opportunities of health, and of education. But such a view of the state implies the belief in possibilities for all its citizens, of longer life, more vitality, and higher levels of intercourse and enjoyment than any which now exist in the world.

The common good which is the purpose of a public policy based upon moral principles can perhaps be most easily perceived in terms of health. Nobody doubts the value of the control by public authorities over drainage and water-supply. No one dare propose to provide less adequate drainage and less excellent water for the poor than for the rich. Most people now see that the advantage of preventing epidemic disease in any community accrues equally to all its members. Thus, although the danger of cholera and typhus was much greater for the poor than for the rich, we do not now suppose that our public health system aims at the protection of any one class in the community. The civilized nations of the West introduced drainage and water-supply to overcome the evil of epidemic disease. They improved the amount and the variety of their food supplies, and the result has been not merely a reduction of the deaths from disease and famine, but an actual increase in the average length of life, an immense improvement in the vitality and intelligence and fineness of emotions of most men and women

between birth and death. The health services even in their present limited form have provided for a common good which those who first established these services hardly imagined. The situation is morally better if men and women are freer of disease and premature death. But there are still demagogues of the privileged rich, like W. R. Inge, lately Dean of St. Paul's, who complain that the health services are merely continuing the lives of the decrepit or the defective.

A completely mistaken belief exists among the rich and powerful that the public services of a modern state maintain the existence of those who are of no value to the community. Indeed some go so far as to say that the advancement of public health prevents "nature" having its way in the elimination of the weak. But if this sort of nature is to be our guide, the first victims would be the rich and the powerful whose position and influence entirely depend upon the maintenance by the majority who are neither rich nor powerful, of institutions which protect property-owners. If nature had its way, the rich would have their throats cut by the far more numerous poor. The whole of the reactionary opposition to the social services is a mere survival of eighteen-century and earlier slave-owning mentality.

The way forward lies in the moral improvement of the relations between men and women and children who are free from a continual fear of death and disease. We are free from medieval plague and famine, but we have hardly begun to realize the extent to which human life can be improved even in its purely physical elements. The really serious problems of a health policy are the inadequate nutrition of a large fraction of the industrial population, the defects of a traditionally unorganized medical service, and a general lack of understanding of what real health may mean. The numerous reports and activities of medically oriented bodies point to the clear conception that the aim of policy should be the raising of the level of what is now accepted a normal health and well-being. We can by action in common provide more than enough food, clothing and shelter for all the members of the community, irrespective of their birth, wealth or occupation. We can discover and apply the means of increasing vitality in each person, so that, each member of our

society may see more clearly, feel more keenly, and think more clearly. The aim, therefore, is at an immediate and extensive raising of the level of health service of the state and public authorities. The power of common action in matters of health has hardly yet been tested. Few yet realize that all civilized life depends on a plan of action in common.

Formerly, sociologists followed the debate over the socialisation of medicine as indeed a debatable question; but now they consider the issue as a foregone conclusion. It is bound to come. The debate merely affects the date and the form of its arrival. The economic factor has prevented too often the inability of the suffering human beings to have the ministrations of the modern doctor, and has reached such intolerable proportions that social medicine is the most certain future development.

No one has penned more memorable words regarding the fated crisis of American medicine than Dr. Henry E. Sigerist: "American medicine is at the crossroads. Scientifically it has, by unremittingly purposeful effort, caught up with Europe, and it is now leading in many lines of work. It is armed with the most superb equipment, with modern hospitals, laboratories and schools, manned by a large, competent, and well trained corps of physicians. It has behind it a history, long enough to have borne fruit, short enough not to be oppressive, with the way into the future open. Its task is a grateful one, for the majority of the population has faith in science and in the physician as its representative. The skeptical attitude towards the physician, so common in Europe, is seldom met in America. And now American medicine is faced with the greatest task of all; it must put this artfully fashioned apparatus to work; now the scientific problem is solved, it must find the social solution. It is an enormous problem, requiring a great deal of courage; for it is a question of treading on new ground, of going along new, untried paths, a new frontier has been opened, and calls for another generation of pioneers."[12]

(To be Continued)

[12] Sigerist, Henry E., *American Medicine*. (New York, 1934.) P. 192.

EXPERIMENTS OF DOCTOR JOSEPH ZAMBECCARI CONCERNING THE EXCISION OF VARIOUS ORGANS FROM DIFFERENT LIVING ANIMALS

Written by Him and Dedicated to the Most Illustrious Master Francesco Redi. Florence MDCLXXX (1680), Francesco Onofri. With Permission of the Authorities.

TRANSLATED FROM THE ITALIAN, WITH NOTES BY

SAUL JARCHO, M. D.*

That the spleen can be cut out of the bodies of various animals without their dying or becoming unhealthy is a fact well known even to those who are beginners in Anatomy and Medicine. Operations performed in this way were not unknown to the old masters, and are mentioned by Q. Serenus Sammonicus [1] and by Pliny [2] in his Natural History, Book XI, chapter 37. Caelius Aurelianus,[3] however, probably referring only to man, considered the operation a myth. The famous John Riolanus,[4] in his Anthropography, Book II, chapter 23, likewise regarded it as a myth. If Riolanus had not been willing to rely on conjectures supplied by his own opinions, if he had taken counsel with Experience the true mistress of all things, he would have perceived how easily and safely the spleen can be taken out of various animals—a fact which has become clear to many able men of modern times who have been willing to make the test. With similar success I have often handled the spleen in various dogs, male and female, young and old, and as Your Excellency knows, I have excised the spleen at various times in the presence of many interested friends, especially Doctors Bernardino Ciarpaglini [5] of Pratovecchio, Ipolito Neri [6] of Empoli, Stefano Bonucci [7] of Arezzo, and many others. Not one of the dogs died or became sick, except two which perhaps through defect of the external suture remained with a hernia of the omentum; one of the dogs was subsequently cured of this by the help of nature alone, which is the one and only healer of all

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diseases. Therefore I am greatly astonished that the learned Isbrandus Diemerbroeck [8] has written in his Anatomy, Book I, chapter 13, that of the many dogs whose spleen he removed few—indeed very few—survived, and that the few which were lucky enough to survive became melancholy, depressed, indolent, and unhealthy, and died a short time thereafter. I know from certain and ocular experience that very few dogs die of this operation. What is more, I know that they live a long time; they are healthy, happy and active, and are fully able to carry out all activities necessary for life and also those necessary for propagation of the species.

Now, since I have learned with certainty that animals can live without a spleen, I could wish to have the good luck to know with equal certainty what function the spleen subserves, and what use it might have in the body. I have not yet clarified this. Indeed, with this purpose in mind I have applied myself to removing spleens, being inspired by that which I read on the subject in the works of our incomparable Galileo.[9] These are his words, put in the mouth of Sagredo:

> I should consider it a great piece of arrogance or even folly for anyone to say that, because I do not know of what use Jupiter and Saturn are, these planets are superfluous, indeed do not exist in nature; while, O man of folly, I do not even know the functions of the arteries, the cartilages, the spleen or the bile, nor indeed would I even know that I have a spleen or bile or kidneys if these things had not been shown me in numerous dissections. I shall be able to understand the working of my spleen only when someone shall have excised it.

Being thus inspired, as I have said, by the words of this wise man, I wished to study the condition of a dog which had had its spleen removed six and a half months previously by Doctor Bernardino Ciarpaglini. In the organs of this dog I found nothing remarkable except that in that part of the stomach where the vas breve is, I saw a glandular tubercle as large as a nut. When this was cut it yielded a small amount of white milky fluid. In order to determine whether this could be confirmed and found in other dogs, I opened two more. These had had their spleens removed four months previously. In neither of them could I find any such glandular tubercle. One dog had all its viscera in perfect condition; there was no trace of the vas

breve or of any of the splenic vessels. In the organs of the other dog, in addition to the absence of the splenic vessels and vas breve, it was noticeable that the omentum was attached in various places to the peritoneum, the kidneys, and the left side of the stomach. Moreover one edge of that part of the liver which covers the stomach and which extends to the left was strongly attached and, so to speak, grown to the stomach, and could not be separated therefrom without injury. In addition it was noticed that a certain minute yellow efflorescence,[10] almost like a gland, had formed here and there in groups and spots in the mesentery and in the small and large intestine, and was attached so firmly that it could not be removed without the knife and without tearing.

After these experiments on removal of the spleen had been brought to a successful conclusion, Your Excellency with customary goodwill encouraged me and my companions to go further and cut and remove various organs from animals in order to see what good or bad result might follow. I courageously embarked upon this exactly in the same way as the discoverers of the New World, who under the mercy of fortune first entrusted themselves to the sea, without knowing (so to speak) what they were doing and where they were going. However, I did not have their good luck. Instead, I fared as did those who looked for the Terra Australis Incognita and never reached it. Although they did not attain their objective, nevertheless they left for posterity an account of their voyages which may be useful in times to come.

Following this example I have decided to write a concise account of my experiences, which I beg Your Excellency to take under protection, since you have been the prime mover of the work and in your house have given all necessary assistance and advice.

Certain modern physicians and anatomists have noted in their writings that although nature has given two kidneys to every animal, occasional individuals have been found who had but one kidney, which carried out the duties of two. On the basis of these reports I desired to find out whether a dog would live after one kidney had been cut out, and whether it would live without any defect.

Therefore on the first day of June of the current year, 1680, I took a dog, tied it to a table, and carefully shaved the skin over the

left side of the lower abdomen. At a distance of four fingerbreadths below the false ribs I cut into the skin, then into the muscles. When I reached the membrane known as the Peritoneum, within which the intestines and other viscera of the lower abdomen are situated, I cut it as carefully as possible so as not to injure the intestines. The latter contingency would have occurred very readily had I not elected to make the first opening in the peritoneum at the moment when the dog was exhaling; at this time the ascending diaphragm could not press upon the organs contained in the abdomen and the latter were not so close to the peritoneum. Having made the first cut I introduced a finger, raised up the membrane and without difficulty enlarged the incision to the extent of five fingerbreadths. Immediately all the intestines escaped through the opening, an occurrence which greatly hindered the operation. At last, placing my hand at the site of the kidney I separated it from the fatty membrane, which held it so firmly that it could scarcely be brought to the edges of the incision. After I had separated the kidney from this membrane I without difficulty brought it out of the abdomen and then had no trouble in ligating the ureter after which I cut it above the ligature and toward the kidney. Then with a single ligature I tightly tied the artery and vein en masse, together with all the other vessels which enter the kidney in a group. Then I cut the kidney away and removed it. Immediately after this I replaced the intestines in order.

With a soft sponge and cold water I washed the edges of the wound and then approximated them with a double thread, taking care to close the peritoneum at the same time.

After the operation, during which very little blood was lost, the dog was released. He arose unaided, and began to walk across the room. Then he threw himself on some straw and stretched out. The next morning he vomited twice, bringing up some yellow material. On the third day he defecated, as if he were well, and he also urinated. All through these three days he would not eat or drink but remained stretched out on the ground. On the fourth day he ate a little chewed bread, drank a little water, and urinated twice. The fifth day was like the fourth. On the night of the sixth day he died. The condition of his organs could not be determined. This was due to the diligence of a servant, who finding the dog dead, immediately threw him into the Arno.

I was not discouraged by the death of this dog. Having found a bitch, I opened her on the eighth of June and excised the kidney by the same method which I had employed on the previous animal, but I used a little more care. I left a small space open at the lowest part of the wound. I placed the animal on a bed of rags where she remained for two days without accepting food or drink, nor did she urinate or defecate. During the operation, while I was putting the intestines back into the abdomen, I had noticed that the rectum was full of very hard stool. Surmising that the animal might be unable to expel this material because the intestinal muscles lacked the assistance of the abdominal muscles, I had an enema given early on the third day. This worked perfectly. The animal swallowed a bit of mush which I placed in her mouth. At the end of the third day the sutures of the wound broke open; a fetid and malodorous material was discharged, which she continually licked across the wound. On the fourth and fifth days she refused food. On the sixth she began to eat and the wound showed signs of healing. On the thirteenth day it was completely cicatrized, and the animal was entirely cured. She ate eagerly and with voracity. At the present time, several months after the removal of the kidney, she continues to eat well and has become quite fat.

A similar fortunate result was not obtained in the case of the next three dogs on which I performed the same operation. One died at the end of the second day, one died eighteen hours after the operation, and one died on the sixth day. This last dog began to eat and drink on the beginning of the third day and continued through the fourth. On the fifth he stopped eating but continued to take fluid, which was vomited almost immediately after it was ingested. On the sixth day he died and when the abdomen was opened all the organs were found stuck together in a mass.

In all three dogs it was noticed that as long as they kept alive they passed urine and feces without difficulty.

On the second day of July of the present year 1680 I cut the left kidney out of a male dog. I made the usual ligations, returned the organs to their places, and sewed up the wound. Toward the end of the third day the dog began to eat and drink a little. From day to day he continued to eat more and more so that on the seventh and

eighth day he did not eat but rather devoured. He could not satisfy his hunger, although I fed him appropriate quantities of good and delicate food, easy to digest. On the eighteenth day the wound appeared completely healed. Therefore on the twenty-second day I set the dog free and he went back to the home of his previous owner. Many days later he died there, as I have been told and as I can believe. Two other dogs in whom I also removed a kidney have continued to live and are perfectly well. I am keeping them alive in order to find out after many months what nature will do in their bodies and what work she will accomplish there.

During the same time I and my associates did not limit ourselves to experimenting on the kidneys alone. Experiments have also been made on other organs. I opened the lower abdomen of a dog on the right side. I found the liver divided into seven lobes, in one of which the gall bladder was implanted. I cut the gall bladder across and expressed all the bile drop by drop. Then I ligated the gall bladder tightly near the substance of the liver, but left the neck and the duct free. Then I returned the intestines to their places and sewed up the wound. On the fourth day the dog began to eat and continued to do so. He recovered completely without any permanent damage, although prior to cutting the gall bladder I had purposely made a small laceration nearby in the liver. Two and a half months after this operation I opened the same dog again and found that the omentum was attached to that part of the liver on which I had operated, as also were the intestines. Moreover, the gall bladder was entirely hidden and buried in the substance of the liver. The lobe of the liver so completely covered it as to give the appearance that the gall bladder was no longer present and that the lobe merely gave rise to an ordinary hepatic duct.

Meanwhile Doctor Stefano Bonucci laid hands on another dog and excised the lobe in the concavity of which the gall bladder lies. He observed that the bladder was loosely attached, since the curved part of the lobe had a long natural cleft in which the gall bladder was uncovered, being unattached also to the concave part, and only very slightly and superficially attached by its fundus to the extreme edges of the lobe. The deepest attachment which it had was that between the neck and the center of the liver. Signor Bonucci gently

and dexterously liberated the fundus of the gall bladder. Then after applying a strong ligature near the neck, he cut the gall bladder away. Before sewing up the wound he also cut away a big piece of omentum. On the beginning of the third day the dog began to eat, and was completely restored to health in sixteen days. After this I opened another dog and after dexterously liberating the gall bladder on all sides, since it was completely attached to the liver, I cut it out completely without breaking it. I ligated the cystic duct in order to make sure that bile could not enter it on its way onward to the intestines; however I left the hepatic duct—or rather ducts—free, and sewed up the wound as usual. This animal refused to take food and on the fifth day it died. On opening the body I found that part of the intestine was adherent to the margins of the fossa in the liver from which the gall bladder had been excised, and this fossa was completely filled with pure extravasated bile, but there was not a drop of extravasated blood to be seen mixed with the bile. The fossa, moreover, had become much deeper than it had been when the gall bladder was removed. In addition, the margins of the fossa were so firmly adherent to the aforementioned portion of intestine that when I tried to separate them a considerable piece of liver remained attached to the intestine. The cystic duct, since it had been tied, was found to be entirely empty of bile, but the hepatic ducts were completely filled although they had poured out a certain amount of bile into the intestine.

This demonstrates clearly how little substance there is in the opinion of the learned Franciscus de la Boe Sylvius, who held that the bile does not run from the liver through the hepatic duct to the loops of the intestine, but that it goes back to the liver through the hepatic duct and that it reaches the hepatic duct from the cystic duct by way of the common duct.[11, 12]

After making these aforementioned experiments on the gall bladder I opened the abdomen of another dog and drew the liver to the margins of the wound. Selecting one of the lobes in which neither the gall bladder nor any of the biliary canals was rooted, I ligated the lobe very tightly where it was least adherent, and then I cut the lobe away. I sewed the abdominal wound with the usual suture of waxed thread.

(NOTE: The next section is found in the original Italian edition of 1680 but was (accidentally?) omitted by Mangetus in the Latin edition of 1685).

As soon as the animal was released it stretched out on the ground on its right side and remained thus until it died. This occurred twelve hours after I had removed the lobe of liver. On examining the body I found the omentum attached to the inner margins of the sutured wound and the stomach blown up with wind like a leather-bottle. The liver had become yellow. The gall bladder was twofold or even more than twofold larger than it had been when the lobe of the liver was removed. It was completely full of bile; in addition much bile had transuded, since not only was the outside of the gall bladder completely stained with bile but all the neighboring organs were found to be stained with the same yellow color. The ligature applied to the liver had not loosened and in the lower abdomen there was not a speck of extravasated blood.

(OMITTED SECTION ENDS HERE)

Meanwhile Doctor Ciarpaglini cut a large lobe of the liver out of a rather big dog. Soon after the abdominal wound had been sutured the dog began to drink great quantities of water, which it soon vomited up again. The same occurred on the next day. After forty hours the dog died; during this time the wound continued to emit small amounts of blood. On opening the dog after its death I found the whole omentum altered to a livid color and all matted together. In the channel of the portal vein I found one of those white and red coagula which are commonly called Polyps. All the other organs were in the natural condition with no apparent change. The lobes of the liver and the gall bladder were also in normal condition and color, contrary to what had happened in the dog mentioned previously. The ligature on the seventh lobe had held without loosening, and the small remnant of this lobe that had remained attached to this ligature was completely liquefied, weakened, and reduced to nothing.

I had at home a little red dog in which, as I shall subsequently relate, I had cut away a piece of the caecum, and which had been well again for many days past. In this dog the same doctor Ciarpaglini opened the abdomen anew and cut out a whole lobe of liver. Toward

the end of the second day this dog began to eat abundantly; in no more than nine days the wound was healed and the animal was perfectly well. A perfect cure was likewise obtained in another dog in which I also cut out one lobe of the liver. At the present time, after a lapse of several months, this dog is alive, healthy, active and eager, as if he had never had an illness.

I shall now pass on to other observations. In a certain dog I separated the caecum, freed it from its bonds and wrappings, cut out almost the whole of it, and sewed up with a strong ligature. On the third day the dog ate a little; on the fifth it died. It had gnawed and torn the sutures with its teeth. It had also gnawed its own flesh and had dug a large hole in its own belly. After it was dead I dissected it and found that the ligature on the caecum had become loose but that all the other organs were in the natural condition except the omentum, which was somewhat rolled up and adherent in several places.

In another red dog I also cut away a portion of the caecum, but less than in the previous one, and applied the ligature more carefully. This dog recovered very quickly, the wound being perfectly cicatrized in eleven days. This was the same dog in which, as I have stated above, I subsequently and successfully cut one of the seven lobes of the liver. Just as it had come out alive from these two experiments it likewise survived two more, and as I shall say in the appropriate place, it died in the fifth experiment. Since it had died more than three months after the caecum had been cut, I was curious to find out the condition of this caecum in the dead animal. I discovered that the ligature had become loose and the bottom of the caecum was wide open. In its lumen there was no fecal material whatever. The inside was white and clean and there was no stool within the abdominal cavity.

Wishing to make the same test in fowl, I cut out a goodly piece of the two caeca of a fat cockerel. I then made a strong ligature and firmly tied the veins and arteries of the mesentery, to which the two caeca are attached. Then I sewed up the external wound. For three days in succession the cockerel refused food and drink. At the time when the intestine was cut the crop was full of millet. During the three days this millet remained in the crop and did not enter the

stomach. After the third day the millet descended and the animal began to peck and to drink, and it recovered. From the small cockerel which it then was, it developed into a beautiful proud rooster.

On the following days I cut out parts of the intestine in other cockerels. Several recovered, several died in four and five days. In all I noticed that when the crop was full of millet it did not empty before the end of the second or third day or even later. This makes me recognize with what prudence the ancient Greeks and Latins advised those surgeons and physicians who treated the wounded that they administer food most sparingly. I am supported in this opinion by observations made in the aforementioned dogs which had serious wounds and which refused food for the first three days. Let this be told simply so that it may reach the ignorant public, which always is afraid that a sick person will die of hunger.

For a man to die of hunger takes many days. Read the story of Count Ugolino della Gherardesca in the Divine Poem of Dante.[13] Read the stories of those who lost their course in the early voyages to the East and West Indies. But let us return to the excision of the caeca in birds. Seeing the success of my attempts in chickens I became curious to try the same thing in doves. When one was brought to me I opened its abdomen and looked for the caeca. I perceived that these doves are different from chickens. Whereas in chickens the caeca are eighteen fingers long, in doves the caeca are so small as to be hardly visible; they are smaller than a grain of corn and are not much thicker than a thick pin. I wondered greatly at this difference, but Your Excellency to satisfy my mind gave me a concise account of that which you had long observed concerning this in birds. You also showed me a chapter of your manuscript treatise on eels, in which you speak incidentally of the caeca of animals, and allowed me to make it public. Therefore I shall take the liberty of transcribing the following excerpt.[14]

> The eel, like the Conger, the Moray and the Sea-viper, is entirely devoid of a caecum; hence some have thought that Nature has denied a viscus of this kind to all fishes, but has given one only to man, and to all the quadrupeds, and to all the birds.
>
> I believe this opinion is false, since there are many fishes provided with a caecum, especially the sepia, the totano, the octopus, and the seal or sea-calf. In fact there are fishes which have not merely one caecum, but many. There

are three in the perch and the tanuda, four in the gilt-head, six in the organo and in the ragana or sea-dragon, eight in the greater scorpion, sixteen in the flying-fish, twenty-two in the sphirena, twenty-seven in the brook trout, many in the marine tench, the pike, the mullet and in St. Peter's fish, to which Aldovrando [15] (sic) has given the name of 'carpenter.' There are many also in the first holothurian of Rondeletius,[16] to which fishermen have given an obscene name. Many hundreds are the caeca of the bonito; they are almost without number. This fish has a long thick caecum which is situated almost at the beginning of the duodenum and which spreads out into many large ramifications. Not only the main trunk but also all the branches are further subdivided into innumerable very slender caeca. Not all the species of bonito have caeca of this type, however. There is a kind of bonito to which fishermen have given the name of Lucertolone. In this fish the pylorus and the beginning of the duodenum are crowned by very many extremely thin appendages. However there is a great difference between the location of the caeca in fishes and their location in birds. Whereas in fishes the caeca are situated for the most part about the pylorus or in the duodenum slightly beyond the pylorus, the caeca in birds are placed (so to speak) at the beginning of the intestinum rectum. I have said 'for the most part' since there are certain fishes, especially the cartilaginous fishes, which have a single small caecum situated near the anus, almost at the very end of the rectum. For example, the angel-fish has a caecum shaped like a small sickle; in the dogfish and in the porpoise or centrina of Rondeletius [17] the caecum has the form of a small pear; and in the eagle-fish it is cylindrical. But, just as it is true that not all fishes have a caecum, it is to an equal degree not true that all birds have *two* caeca. Thus there are birds which have no caecum at all, like the hoopoe, the woodpecker, the swift (which is not web-footed), and the bat. There are birds which have only one caecum, like the heron, the red-poll, the bittern, the hawk, and the white fishing-eagle, whose caecum is round and not any larger than a grain of pepper. But the royal eagle has two caeca which are very short and scarcely half as broad as a fingernail. For the great diversity of form and size of the caeca in birds, the reader may consult fig. 21 and 22, etc., where for example it is shown that the white partridge of the Pyrenees, a bird which is no larger than one of our ordinary large pigeons, has caeca longer than a palm and a half; and the shoveller-duck or albardeola, which is a large bird and weighs five to six pounds, has caeca smaller than a grain of corn. The bat, a bird so small that when it is fat and in full flesh weighs at the most two and a half ounces, has caeca four fingerbreadths long. The pelican, otherwise known as the oncrotalus, is a large bird which ordinarily weighs about twenty-two pounds and has a wingspread of five Florentine ells; its caeca although quite thick are no longer than four fingerbreadths. The plover, which is a little bird and is smaller than the pigeon, has caeca three fingerbreadths long; in the turtle dove, which is very slightly larger than the plover, the caeca are no larger than

a grain of rye halved lengthwise. Probably it was the smallness of the caeca which deceived Marcus Aurelius Severinus [18] when he said (in the Zootomia) that turtle doves and pigeons were not endowed by nature with caeca. But if there are birds in which the caecum is lacking, there are also quadrupeds in which it is similarly lacking, such as the weasel, the mole, the hedgehog, and the badger. Contrariwise (to say nothing of the rabbit, the guinea pig, the domestic mouse, and the porcupine) the water-rat has a broad and long caecum, so folded that it can take more material than all the other intestines together. Serpents have no caecum. In lizards and green lizards a caecum is present. African lizards are devoid of it. From the observation of so many caeca in such diverse animals it appears to me that the opinion of Simon Paulli cannot be true, when he would assert in the second and third parts of his Quadripartitum Botanicum [19] that the caecum is the natural and necessary receptacle for flatus, exactly as the gall bladder is the natural and necessary receptacle for bile. In all the caeca of animals, living and dead, I have always found feces, and frequently in abundance. I remember that sometimes in the coot, to say nothing of others, and the bat, and the owl I have found a blackish material so impalpable that it might be likened to those painters' earths which are completely ground on the porphyry slab with grinding tools. And in these caeca this material is so pressed and crammed that, besides their being full, it would be impossible for the smallest gust of flatus to enter. In his lectures in Anatomy, Arcangelo Piccolomini [20] has observed that nature has given two caeca to voracious animals. Because of the differences in size and number which are encountered in the caeca in birds and fishes, and because of their being present in some and absent in others, I am not eager to follow the opinion of Piccolomini and believe that this double intestine is made on account of greater voracity; the more so because many fishes and many other animals, which eat during the entire year and live on prey, are not endowed with caeca, whereas other fish and other animals which abstain from food during part of the year have many caeca or if they have but one, it is very large.

In the meanwhile Dr. Ipolito Neri had read the following discussion in Your Excellency's book entitled Experiments Concerning Various things in Nature: [21]

There are certain people who even as late as our own times hold with Dioscorides [22] in his second book and Pliny in the eighth and twenty-third books of the Natural History,[23] where it is written that the celandine was discovered by swallows. The same statement was made by Tertullian [24] at the end of his book De Penitentia, where he said: 'A swallow, when it has blinded its young, knows how to give them eyes again, by means of the celandine.' However the cure of swallows and of the other birds is not due to the celandine, which is not to be found in swallows' nests; it is due to nature

alone, without the aid of medicines. This will be clear to anyone who will have the curiosity to perforate the eyes of a swallow or any other bird gently with a needle or lancet. I have tried this in pigeons, chickens, geese, ducks, and turkeys. Having seen spontaneous cures in less than twenty-four hours I have come to agree with the statement made by Cornelius Celsus [25] in his sixth book: 'If the eye is injured by an external blow, and blood pours into it, there is nothing better than to rub it with the blood of pigeons, doves, or swallows. Nor is this without a reason; since their eyes return to normal some time after having suffered an external injury; and this is most rapid in the case of the swallow. Wherefore the fable has arisen that they are restored by their parents or by the herb celandine, whereas they really get well by themselves.' Perhaps Cornelius Celsus learned this from Aristotle in the fourth book of the Generation of Animals [26] and in the sixth book of the Natural History.[27]

And so Dr. Neri after he had read the aforementioned treatise, observing that Your Excellency had made the aforementioned tests only with the eyes of birds, which heal spontaneously without the aid of the herb celandine, wished to find out whether perchance the same cure might occur in the eyes of quadrupeds. Your Excellency having in fact supplied everything necessary, he gently punctured both eyes of a dog. He used a bloodlancet and expelled all of the aqueous humor, so that the eyes remained like two sacks, empty and wrinkled. The dog was then left to the care of Nature. In six hours or perhaps less it was recognizable that the eyes had refilled and were returned to their natural condition, except for the marks of the wound. The dog was happy and alert, as if it had never had anything wrong with it. What was more important, it did not remain blind but could see very well. This experiment was made in the same red dog from which on different occasions part of the omentum, part of the caecum, and a lobe of the liver had been excised. For this reason we began to compare the dog facetiously to the famous and brave Marshal of Rantzau, who through many wounds received in various battles had gloriously lost almost half his limbs. The same experiment was tried again in several other dogs, and in rabbits, in guinea-pigs, and in a lamb. All of them recovered in a very few hours, and none of them remained blind. Galen in the second chapter of the first book of the Causes of Symptoms although he says that it is very difficult or almost impossible not to lose the eyesight after the aqueous humor has escaped from the eye through a wound, nevertheless at the end he

admits that in one instance a child failed to remain blind on account of an injury of this kind. Here are his own words as translated by the Englishman Thomas Linacre [28] from Greek into Latin:

Caeterum incredibile quiddam nec fieri vulgo solitum, in puero vidimus, qui stilo in pupillae loco fuerat compunctus; nam cum statim effluxisset aquosus humor, tum pupilla ipsa minor est reddita, tum tota cornea apparuit rugosior. Caeterum sanatus, postea recte vidit, collecto scilicet paulatim eo, qui effluxerat humore. Verum haec rara sunt. Caecitates autem eiusmodi vulneribus plerumque succedunt. (I have seen another incredible and uncommon occurrence in a boy who had been punctured with a stilus at the site of the pupil. As soon as the aqueous humor had flowed out the pupil itself became smaller, then the whole cornea appeared wrinkled. He recovered and afterward could see clearly, no doubt because the fluid which had drained away was gradually replenished. Such occurrences are rare, for wounds of this type are usually followed by blindness).

Other instances in different animals can be seen if one reads the sixth chapter of the twenty-ninth book of Pliny,[29] in which the author describes the recovery of vision in swallows, green lizards, and weasels which had been blinded artificially and were cured solely by the providence of nature, although Pliny does not say this but perhaps attributes the cure to certain ridiculous ceremonies and superstitions described in that chapter. Now, just as the regeneration of the aqueous humor in the eyes of animals is a beautiful work of nature alone, in the same way the regeneration of the vitreous humor and crystalline lens is a work of this same nature; but of the latter, what becomes of such regeneration I shall perhaps speak at another time; for the present I shall purposely keep silent about it.

To put an end to these trifles of mine, I shall merely remind Your Excellency that on June twenty-eighth I made a large opening in the abdomen of a dog in order to cut out the pancreas. I noticed that the duct of Wirsung proceeding from the pancreas went on to insert into the intestine at a distance of one palm and two fingerbreadths from the place where the bile duct ended and emptied into the intestine. I do not remember that I have ever observed such a great distance in any other dog although I have anatomized not a few of them. The fact is that in dogs for the most part the duct of Wirsung empties into the intestine at a distance not greater than two or three fingerbreadths from the orifice of the bile duct.

It is true however that I have sometimes found that the aforementioned duct of Wirsung was united to the bile duct to form a single canal near the opening into the intestine, but such cases are sports of nature.

Having made this observation I cut out the dog's pancreas, and the animal died in forty-eight hours. After an equal or slightly greater interval another dog died in which I had ligated individually six of the veins which run through the mesentery. When it was dead I opened it and saw that in the ligated veins all the blood was coagulated. And now, to make an end, in offering Your Excellency my reverent respect and my infinite gratitude, I make most humble salutation.

Your Excellency's most humble and obedient servant

GIUSEPPE ZAMBECCARI

NOTES ON THE "EXPERIMENTS" OF ZAMBECCARI

1. QUINTUS SERENUS SAMMONICUS: SPLENI CURANDO

Serenus Sammonicus was an obscure medical poet who lived in the third century of the Christian era. Of his "Praecepta Medica," Baudet says (Paris, 1845): "Sous le rapport de la science, il est certain qu'il y a plus à profiter pour la curiosité et l'erudition que pour l'art de guérir."

> Splen tumidus nocet, et risum tamen addit ineptum,
> Ut mihi sardois videatur proximus herbis,
> Irrita quae miseris permiscent gaudia fatis.
> Dicitur exectus faciles auferre cachinnos,
> Perpetuoque aevo frontem praestare severam.
>
> A swollen spleen is bad and makes you laugh
> Almost as much with Sardian herbs you chaff.
> But joys are vain when mixed with evil fate.
> With spleen removed the laugh will cease, they say,
> And stern of face you'll be until your dying day.

2. PLINY: *Natural History*, translation by J. Bostock and H. T. Riley. Bohn Library, London, 1855, vol. 3, p. 73. Bk. XI, chap. 37 (80).

The spleen sometimes offers a peculiar impediment in running, for which reason the region of the spleen is cauterized in runners who are troubled with pains there. It is said also, that if the spleen is removed by an incision,

animals may survive. There are some persons who think that with the spleen man loses the power of laughing, and that excessive laughter is caused by the over-growth of it.

3. CAELIUS AURELIANUS: *Morborum Chronicorum*, Bk. III, chap. IV.

Certain physicians have even dared to order that the spleen be cut out or removed, which I believe has been done in words only but not in actual fact.

4. To honor the memory of Professor Carlo Fedeli, a leader in research on Zambeccari, I herewith transcribe, in English translation, part of a note from Fedeli's edition of the "Experiments of Dr. Joseph Zambeccari" 1907, p. xxvi ff:

JOHN RIOLANUS (1577-1657) of Paris, was a distinguished physician and, for his time, a great anatomist. He had a great liking for botany and founded the famous "Jardin des Plantes" at Paris. We Tuscans must not forget that he was devotedly attached to Maria dei Medici; he followed her into exile and stayed with her until her death at Cologne in 1642. Today the name of Riolanus is known chiefly because of his wilful opposition to the discovery of the circulation of blood.

Here is a complete quotation of Riolanus' remarks on splenectomy in the Anthropographia:

> "Can the spleen be removed safely in such a way that life will be happier after its removal? Older writers saw in the spleen a peculiar impediment to running. Pliny says, Book 2 (sic!) chap. 37, that for this reason it was cauterized in runners, and that animals could live even with the spleen removed. Rossetus says he heard from certain people that the Turks also cauterize the spleen. Nicolai in his Oriental Travels could never find out the method; but he saw that the spleen had been successfully extirpated by corruption in some persons who had had pain in the left hypochondrium.
>
> "Tralles says in Book VIII that he treated a soldier in whom barbarians had burned the entire splenic region with whitehot irons. Flud saw the spleen of a dog removed, through incision, by a skilled surgeon, and the dog survived. Leonardus Fioravantus asserts that a noble lady who was seriously and almost fatally troubled by her spleen and had been given up by her physicians, recovered after her spleen had been extracted by a surgeon.
>
> * * * * * * * * * *
>
> "I could more easily believe with Aretaeus that the spleen is naturally soluble and can be made smaller and consumed by medicine, as is said to happen with spleenwort, or water from forges, or tamarisc. But those who have been deprived of the spleen afterward are sick and unhappy; because the body is nourished by thick and impure blood; it is impossible that they should become more active and alert for all bodily actions.

"Therefore, to begin with, the opinion of Erasistratus is foolish, that the necessity of the spleen is nil or slight; perhaps he was convinced by the fact that animals live after the spleen has been cut out or destroyed by medicines, and by the fact that several persons have been found who had no spleen, like the woman whom Hollerius saw. It is not likely that a man can live well after the spleen has been removed or destroyed. Extirpation of the spleen cannot be attempted through a wound without certain danger to life, nor is it very easily destroyed medicinally. Even this possibility is one which has been handed down by the older writers."

5. Bernardino Ciarpaglini: See *Redi, F.*: *Opere.* Milano, 1809-11, vol. 7, pp. 426-427.

Letter from Redi to Dr. Ciarpaglini, June 9, 1685.

6. Ippolito Neri (1652-1708): Like Zambeccari, Neri studied medicine at Pisa, then became a pupil of Redi. He wrote several volumes of poetry (*Rime*—Lucca, 1700; *La Presa di San Miniato*—Livorno, 1764). Some of his writings are still unpublished.

Natali, G. in Enciclopedia Italiana, vol. 24, p. 596, Rome, 1934—s. v.: Neri, I.

Bargellini, N. in *Storia d'Empoli* by L. Lazzeri, Empoli, 1873, pp. 337-385.

Fabiani, V.: Ippolito Neri, Firenze, 1901.

Mazzatinti, G. et al: Inventari dei Manoscritti delle Biblioteche d'Italia, vol. 8, p. 35, 1898; vol. 11, p. 207, 1901; vol. 13, pp. 105, 119, 131, 141, 1905-6.

Redi, F.: Opere. Milano, 1809-11, vol . 7, p. 227: Letter from Redi to Dr. Ippolito Neri, June 14, 1687.

7. Stefano Bonucci:

According to *G. Mazzatinti* (*Inventari dei Manoscritti d'Italia,* vol. II, p. 187, Forli, 1892) the Biblioteca Guarnacci at Volterra contains a collection of letters written by and to Antonmaria Bonucci. Efforts are now being made to discover whether this collection contains letters by Stefano Bonucci.

8. Isbrandus Diemerbroeck (1608-1674): *Anatome Corporis Humani.* Lugduni, 1679. Bk. I, chap. 13, pp. 90-91.

As for dogs whose spleens are excised, not all remain alive, indeed out of a great number scarcely a few are saved, and these drag out the remainder of their lives depressed and cowardly, and they do not live long; undoubtedly this happens because, through lack of proper substances which the spleen should supply, a suitable ferment is not prepared in the liver.

Therefore the blood generated in the heart is too thick, and the spirits—both animal and vital—which come from such blood are few and thick.

9. GALILEO GALILEI: *Opere*. Firenze, 1842, vol. I, p. 400. (Dialogo intorno ai due massimi sistemi del mondo Tolemaico e Copernicano, 1632).

10. JARCHO, S. and ANDERSEN, D. H.: Amer. J. Path., *15*: 527-545, 1939. Traumatic Autotransplantation of Splenic Tissue.

11. FRANCISCUS DELEBOE SYLVIUS: *Opera Medica*. Genevae, 1681. Disputationum Medicarum Decas VI, Sec. 19-36, p. 14 ff.

Certain men who seem to be moved more by the authority of their predecessors than by clear logic or manifest experience have believed that bile is secreted from the blood in the liver and then is transferred through the biliary passages into the gall bladder and small intestine. In actual fact, however, no one who thinks the matter over carefully will readily grant that venous blood, being propelled through the capillaries of the portal vein which are scattered through the liver (for in the first place I treat only with those who admit the circulation of the blood) is deprived of bile while in the liver, since the blood remains fluid by the aid of the bile. Indeed, it seems to me instead that in the liver the blood is mixed with bile and thereby becomes more fluent. . . . The structure of the gall bladder and ducts greatly favors the outpouring of bile from its bladder, and its expulsion and propulsion through all the bile ducts. . . . To express our opinion on this matter in a few words, we believe that bile is made out of very similar parts of the blood which are carried through the cystic arteries to the gall bladder and which pass through the pores in the wall and into the lumen, etc.

12. FRANCISCUS DELEBOE SYLVIUS: *Opera Medica*. Geneva, 1681. Dictata ad Casparis Bartholini Institutiones Anatomicas, chap. XV, Sec. I to XI, pp. 679 ff.

The gall bladder . . . contains the bile which has been generated in itself, and which it expels partly into the intestine . . . and partly into the liver and radicles of the portal vein.

13. DANTE: *Inferno*. XXXIII, especially 1. 37-75.

This famous incident is also quoted by Morgagni: *De Sedibus*: Liber III. Epist. Anat. Med., XXVIII. 7.

14. REDI: *Treatise on Eels*.

So far as I have been able to ascertain from available editions of Redi's works, the treatise here excerpted is still unpublished. This conjecture is supported by a remark of Vedrani (Illustr. med. ital., vol. 9, p. 12, column 1, line 25, 1926).

15. Ulisse Aldrovandi (1522-1605): *De piscibus libri V.* Bononiae, 1613. Bk. I, chap. 25, pp. 109-113, *De Fabro*: "Rondelet was in some doubt as to the class in which this fish should be placed."

It will be observed that Zambeccari has misspelled Aldrovandi's name; the mistake was copied in the translation by Mangetus.

16. Gulielmus Rondeletius: *Libri de Piscibus Marinis.* Lugduni, 1554. Bk. II, chap. 19, p. 125. *De Holothuriorum prima specie.*

Guillaume Rondelet (1507-1566), professor at Montpellier, best known for the aforementioned work, and for his *Universae aquatilium historiae pars altera* (1556). His complete medical works were published at Geneva in 1628. (Montalenti, G. in Enciclop. Ital. vol. XXX, p. 97, Rome, 1936).

17. Rondeletius: Ibid. Bk. I, chap. IX, p. 384. *De Centrina.*

The fish which is called "centrina" by the Greeks has no name in Latin, wherefore the Latin translators have used the Greek term.

18. Marcus Aurelius Severinus (1580-1656): *Zootomia Democritea.* id est anatome generalis totius animantium opificii. Noribergae 1645. Pars Quarta, p. 343.

19. Paulli, S.: *Quadripartitum Botanicum*: Francofurti ad Moenum, 1708, p. 96.

Nature, which as I have stated does nothing in vain, took particular care that the digestive action in the lower abdomen might be carried on correctly, by inserting in the middle of the intestinal tract—at the end of the small bowel and the beginning of the large—a spacious appendage for flatus, where there might be place for wind and expelled gusts, while digestion went on in the natural way.

20. Arcangelo Piccolomini (1525-1586) was Professor of Philosophy at Bordeaux, and was physician to Pius IV. He translated Galen's treatise on humors (Paris 1556). His Anatomical treatise, *Anatomicae Praelectiones Explicantes Mirificam Corporis Humani Fabricam* (Rome 1586), was dedicated to Sixtus V. He was the first to describe the foramen ovale in the embryo (Castiglioni, A. in Enciclopedia Italiana, *27*, p. 157, Rome, 1935).

21. Redi, F.: *Opere.* Milano, 1809-11, vol. IV, p. 18.

Experiments concerning various things in nature, and especially those which have been brought from the Indies, made by Francis Redi and written in a letter to Father Athanasius Kircher.

22. PEDANIUS DIOSCORIDES: in Medicorum Graecorum Opera Quae Exstant. ed. Kuhn. Lipsiae 1829, vol. 25, Bk. II, chap. 211.

It is believed that the celandine takes its name (chelidonium) from the fact that it blossoms when the swallows (chelidon) come, and fades at their departure. Some have stated that when a young swallow is blinded its mother heals the eyesight by applying the celandine.

See also Theophrastus: Enquiry into Plants, VII, 15, 1.

23. PLINY: *Natural History*, translation by J. Bostock and H. T. Riley. Bohn Library, London, 1855. Bk. VIII, chap. 41.

The swallow has shown us that the chelidonia (celandine) is very serviceable to the sight, by the fact of its employing it for the cure of the young, when their eyes are effected.

PLINY: Ibid., Bk. XXV, chap. 50.

The brute animals have also been the discoverers of certain plants: among them we will name chelidonia first of all. It is by the aid of this plant that the swallow restores the sight of the young birds in the nest, and even, as some persons will have it, when the eyes have been plucked out.

24. TERTULLIAN: *De Paenitentia*, XII, 6.

Even the dumb and unreasoning animals recognize at proper times the medicines which have been designed for them by divine providence. A stag wounded by an arrow knows how to cure itself with dittany in order to expel the weapon from the wound and overcome the irrevocable delays thereof. The swallow, if its young have been blinded, knows how to restore their vision by means of the celandine.

25. CELSUS: *De Medicina*, VI, 39. English translation by W. G. Spencer, Loeb Classical Library, vol. 2, p. 227, 1938.

26. ARISTOTLE: *De Generatione Animalium*. Translation by Arthur Platt. Oxford, Clarendon Press, 1910, Bk. IV, 6, Sec. 774B.

Hence if the eyes of swallows while still young be put out they recover their sight again, for the birds are still developing, not yet developed, when the injury is inflicted, so that the eyes grow and sprout afresh.

Platt's footnote to this passage is very interesting: Aubert and Wimmer say simply that modern experiments confirm this, but we must look a little more deeply into the matter. Redi (Opuscula, pars secunda, ed. 1729, p. 16) does indeed confirm the statement that the young swallow can recover its sight, 'id quod cuivis manifestum esse poterit, cui placuit oculos hirundinum, aut alterius cuiuscunque aviculae, acer vel scalpro *solerter terbrare*.' And he says that he made the experiment himself on many birds. But Professor

Morgan of Columbia University, whom I consulted on this point, has kindly written to say 'if the eyes were "put out," i. e. injured, they might heal and regain their function, but if by "put out" one means "removed," then there can be no question of renewal.' Consequently when Aristotle says the eyes grow and sprout afresh he greatly exaggerates.

Observe how admirably Aristotle has grasped the principle that regeneration is a phenomenon of embryonic growth, "while the bird is developing but not developed.'

27. ARISTOTLE: *Historia Animalium,* translation by D'Arcy Wentworth Thompson. Oxford, Clarendon Press, 1910. Bk. VI, 5. Sec. 563a.

If you pick out the eyes of swallow chicks while they are yet young, the birds will get well again and will see by and by.

28. LINACRE, T.: *Claudii Galeni Pergameni De Causis Symptomatum* interprete Thoma Linacro. Parisiis 1528, Bk. I, p. 26.

29. PLINY: loc. cit., vol. 3, p. 54, Bk. XI, chap. 55.

MEDICAL HISTORY COLLECTIONS IN THE UNITED STATES AND CANADA[1]

III

AN UNIQUE COLLECTION OF OSLERIANA

FRANCES TOMLINSON GARDNER
University of California Medical School Library

It has been the good fortune of the University of California Medical School to be the recipient of an extraordinary gift, installed in the Crummer Room which is the repository of the historical division of the Medical Library. The donation is a unique assemblage of almost one thousand items pertaining to Osler, the product of many years of painstaking effort on the part of Dr. Esther Rosencrantz. While its content of writings by Osler cannot pretend to rival either in size or in completeness the many magnificent Osler collections elsewhere, its personalia and Osleriana give it an outstanding place among similar collections. It has been Dr. Rosencrantz's contention that while the goal of the collector is to amass as much material as is possible, the soul of the mass is what it can contribute to the character and personality of the individual whose achievement has inspired the collection.

Working on this premise, special attention has been paid to gathering together every sort of document by or about Sir William Osler. Notes, letters, programs, all sorts of items which mention his name have been given a place.

The collection of unbound material is very large and beautifully prepared. The friable items are kept together in boxes much like the slip-boxes used to house valuable old books. These are specially made by a professional binder, covered with handblocked Florentine paper and made sturdy enough to withstand the wear and tear of life on a book shelf. Large white labels appear on the backs of each and the contents are thereupon noted. All the reprints, journals and papers find comfortable homes in these boxes. Most of the single sheets, such as letters, are enclosed in cellophane envelopes so that the

[1] See this *Bulletin*, vol. VII, 1939, pp. 535-563; vol. VIII, 1940, pp. 1214-1245.

observer may easily read them, but cannot touch the paper with his hands. These envelopes are fastened to manila folders by cellophane ribbon, thus assuring permanent placement.

There are fourteen letters in Sir William's own hand, including one written by him from Oxford to Professor Fairclough of Stanford University which speaks of the death of his son Revere. There are several hundred letters from personages all over the world, written on some subject concerning Osler.

Under the heading " Tributes to Osler " are 358 unbound leaflets, pamphlets, reprints and booklets about the man. Two large boxes of this section, called the " Cushing Soley Collection " contain the material which was used by Harvey Cushing in the preparation of his " Life of Sir William Osler " and is completely annotated and largely autographed by him. These were given to Dr. Rosencrantz by Dr. Mayo Soley, a pupil and friend of Dr. Cushing, with an appropriate letter.

Separate boxes containing collections of photographs, anecdotes and further letters, stand beside the seven " Tribute Boxes." In these boxes are kept also a collection of Osleriana catalogues, and the programs and minutes of the local " Osler Club " which has been started within the past year. There is room within all these containers for an increase year by year, so that in perpetuity the collection may be augmented.

Nothing has been said so far concerning what would be considered the body of the collection. There are altogether 234 bound volumes. Eighteen of these are various printings of the first eight editions of the *Textbook*, as well as the translations in French, German, and the two Chinese editions. The various editions and impressions of *Aequanimitas*, the *Way of Life* and the *Alabama Student* are also present. Both the first and second editions of the *System of Medicine* are represented, as well as examples of all of Osler's works, including many of his bound monographs.

All these things alone would be interesting as a representative grouping of the products of one man's brain; but there is an added interest. Into every volume are tipped notes, pictures, letters or other items which give personal information about that particular book. The notes tell when and how it was procured, who was the donor or

seller, what it had to do with Osler's life, and how it came to be written. Collectors will appreciate the fact that the personal provenance of a book is the joy of a bibliophile. Each cover hides a being of its own, making this a real biobibliographical achievement—a function markedly stressed by Osler in the introduction to his great catalogue: the *Bibliotheca Osleriana.*

Osler's is the greatest name in modern medicine; and his influence persists strongly to the present day. However, though he is seen clearly through the pages of his writings he is seen impersonally and without body. In the Crummer Room, Osler has become almost a presence, a gentle kindly spirit whose intellect and achievements are given reality through the ephemera which surrounds these monuments.

IV

HISTORICAL COLLECTION OF B. W. WEINBERGER IN NEW YORK

1. *Important authors of early dental writings*, beginning with dentistry's first book, Zene Artznei, 1530, and including the complete editions of Pierre Fauchard's work. Besides the originals, some 400, there are over thirty photostat copies of dental books where but one or two known copies exist, such as each of the fourteen editions of the Zene Artznei 1530-1576, Charles Allen 1685-6-7, the first dental book in English, Arnauld Gilles 1621, 1622, the first known dentist to receive the certificate to practice dentistry in France, etc.

2. *Dental History.*

Perhaps the most complete collection in the world. This collection includes:

A. Books. 1st those entirely devoted to dental history, 2nd books containing historical chapters, 3rd, monographs and small pamphlets, 4th, State, local and institutional, 5th, miscellaneous, 6th, dental dictionaries. Over 200 bound volumes.

B. 18 bound volumes of historical articles that were published in the dental and other journals from 1860, each volume being about two inches thick. 10 volumes contain articles from American and

English journals, 1 volume of German and French, 2 volumes of historical dissertations (only dental) from Sudhoff's Institute in Leipzig, 2 Volumes of historical dissertations in other German and French Universities, 2 volumes of Early (up to 1890) American dental historical pamphlets and reprints. Besides volumes such as Garrison's articles for the Bulletin of the New York Academy of Medicine.

C. Complete collection of books relating to the subject of orthodontia.

D. Small collection of the important medical histories.

E. 2 loose-leaf volumes of photographs of dentists from the seventeenth century to the present day.

F. 3 volumes (loose-leaf), of photographs that relate to the evolution of dentistry from " Early Man " and grouped under some sixty such headings, i. e. The extracting forceps—1, photographs of actual specimens from the Roman period to the present day, 2, as described in medical books, 3, as found in dental books. The dental engine first as the hand instrument to the electric. The dental chair. Dental Prosthesis, etc. Examples of all known ancient pieces from Tuscany, Rome, Greece, etc. Pre-Columbian, etc. The dental office from photographs of painting in art, to examples of the present day.

G. Volume of photographs of displays in different dental historical exhibitions. About 5 inches thick.

H. Volume of medical and dental bookplates.

3. *Dental Bibliography and Indices.*

Collection of 107 that relate to dentistry.

4. *Dental Operating Instruments.*

Chronological story of the development of each of the following, mounted on boards:

A. Collection of the extraction forceps from those used in the Roman period to the present.

B. Collection of " turnkeys " and elevators.

C. Ancient Dental Prosthesis. Replicas of every important item in European Museums.

D. Pre-Columbian inlay and overlay fillings (Replicas).

E. Characteristic filings of various ancient Indians, etc. (Replicas).

F. Evolution of the denture, from the ivory, wooden, gold and silver, through the porcelain group.

G. Individual teeth and crowns. Human and animal, from John Greenwood collection, 1790. Examples of all the early porcelain teeth. Duchateau, 1780; Fonzi, 1806; Charles Willson Peale, the artist, the first made in this country.

H. Porcelain partial dentures and early American bridgework.

I. The development of the orthodontic appliance. Replicas from Albucasis, Fauchard, 1728 to the present.

J. Development of the dental mallet, pluggers, etc.

K. Pearl and ivory handled dental instruments.

L. Evolution of the dental cabinet.

M. The age of hand-made dental instruments.

N. The story of steel instrumentation.

O. George Washington's dentures and mouth. (Replicas).

P. Hypodermic syringes.

Q. Miscellaneous items as yet not mounted.

5 *Complete files of the early dental journals.*

6. *Large collection of lantern slides of important phases of dental history.*

7. *Large collection of negatives of subjects and photographs of dentists.*

PHYSICIANS' LETTERS

SOLOMON R. KAGAN, M. D.
Roxbury, Mass.

Some physicians' letters are a treasure for medical literature. They convey information concerning medical life especially in the field of medical history. They may serve as a material for biography as they reflect the thoughts, feelings, aspirations, interests, and personality of the authors. They may be also masterpieces through their classical style and perfection.

I have a great collection of autographed letters written by eminent European and American physicians, which I intend to present to the Army Medical Library and Boston Medical Library. Several of them are reproduced herewith for the first time.

I

From Dr. W. Pepper to Dr. J. Solis-Cohen

1215 Walnut St.

Dear Doctor,

I take the liberty of sending a case to you, to request the favor of a laryngoscopic examination.

The little child has either enlargement of the bronchial glands pressing on trachea, or an intra-laryngeal or—tracheal growth. I distrust my own laryngoscopic skill in so young a child and yet am very anxious to learn the appearances. The case is from my clinic at the University and if you will make an effort to determine the condition of larynx & give the mother a note of it to bring to me, you will confer on me a personal favor.

Very truly yours,

WILLIAM PEPPER

J. S. Cohen, M. D.
Oct. 14, 70.

II

From Dr. A. Stillé, famous Philadelphia physician, to Dr. J. Solis-Cohen

1500 Walnut St.
Aug. 3, '72

J. Solis-Cohen, M. D.

My dear Doctor:

I have just received from the publishers a copy of your work on Diseases of the Throat, with the Author's compliments.
I thank you very sincerely for this courtesy, and feel quite sure of finding in your work those fruits of experience which are the only valuable ones, because matured in the light of science. On glancing through its pages many catch my eye which I would fain read at once, but am compelled to delay examining until a more convenient season.

Meanwhile believe me with great respect and esteem,

Your very obl. servt.

ALFRED STILLÉ

III

From Dr. F. H. Bosworth to Dr. J. Solis-Cohen

26 West Forty-Sixth Street
Friday, Oct. 4th—'78

Dear Doctor,

I have just learned that the next meeting of the N. Y. Laryngological Soc. is called at my house on Oct. 10th, and also that there is a prospect of your being present—I need not tell you what a genuine pleasure it will be to all of us to meet you at one of our gatherings, and I trust that nothing may interfere with your coming.

It occurred to me to write to you and ask that you will suggest to me anyone that you would care to meet, and I will only be too glad to extend to him an invitation to be present at the meeting.

Our society has been fairly prosperous since its organization and we have done some good things I hope. Still I should look for a new interest and enthusiasm to be infused into it, by the presence of one who has done so much in the country for Laryngoscopy—and should like to make your coming the occasion of awakening something better of individual interest on the part of our members.

The meeting is given up generally to the consideration of clinical cases presented, rather than to the reading of formal papers and for next week there is no special work laid out. I need not say that we should be glad to listen to anything that you might bring with you—

With regards

Very truly

F. H. BOSWORTH

IV

From Dr. S. W. Mitchell to Dr. A. Jacobi

1524 Walnut Street

My dear Jacobi—I should before now have thanked you for the book on the Diseases of Childhood but my son carried it off and today returns it with the remark that it is the freshest and most [?] book on the disorders of Childhood he ever saw. The easy use of well digested learning strikes me most. Few have the art of seeming to own all the material they use and of making you feel that what they get from others acquires new personal values in the using.

Yours truly,

WEIR MITCHELL

March 24,

Prof. Jacobi

V

From Dr. A. Jacobi to Dr. J. S. Billings

110 West Thirty-Fourth St.

Dec. 19th, 82

Dr. John S. Billings

Dear Doctor:

The Bellevue faculty know what they are about, and I am really sorry that you will appear for them this very year, after their public exhibitions of last winter. But it cannot be helped I suppose, and you will patch up their damaged reputation. Perhaps you can do something or say something which will make even them ashamed of themselves.

In regard to the other subject I am writing to Syracuse, and have seen some men here. When you come to N. Y. I hope to see you.

Yours very truly

A. JACOBI

VI

From Dr. M. J. Asch to Dr. J. Solis-Cohen

Union Club
1 West 21st Street
31 W. 31st St.
New York
Feby. 7

My dear Doctor:

You know perhaps from Dr. Robinson that we have formed a Laryngological Society—of which I will write you more fully in a few days. Today I want to know from you if it would be agreeable to you to be elected a corresponding member & let me know so that I can have you elected at the monthly meeting on Thursday next. Otherwise I may have to wait a couple of months perhaps—Anyhow, if I do not hear from you I will propose you. Where can I find the best authority on Naso Pharyngeal Catarrh?

Many thanks for your kindness to Robinson. The throat hospital is in full blast. In a few days I will write you all about it. Today I am in a great haste—& stopped in here so as to be sure to have my letter go.

Yours sincrly

Morris J. Asch

Dr. J. Solis Cohen

VII

From Dr. J. N. Mackenzie to Dr. J. Solis-Cohen

Consultation Hours 9 to 1 C. & P. Telephone Mt. Vernon 4059

Dr. John N. Mackenzie
605 Washington Place
Baltimore

June 24th 1919

Dear J. Solis:—

Your kind little note has just reached me & as I sit at my desk to acknowledge its arrival, my heart and soul go swiftly back to other days—To our early friendship & to what now seems more and more the remote past of the American Laryngological Association. Yes, those were golden hours. What a congenial happy lot that company of delightful souls was—what a combination of scientific earnestness and good fellowship came together in that group of men, who in spite of occasional differences of opinion, of antagonisms and clashes in the heat of a debate, were in their heart of hearts always one.

No matter who your neighbors were at the table, they were sure to be sympathetic and agreeable. Few of the old crowd answer who have gone. Let us of the older generation bear forever in remembrance our comrades of a halcyon past, as the shadows fall and lengthen on the coming years.

With the wish that you may live just as long as you desire to remain upon this planet and with most affectionate remembrances, now & always, believe me,

Yours faithfully,

JOHN

To Dr. J. Solis Cohen—

Philadelphia

VIII

From Dr. H. Cushing to Dr. F. H. Garrison

September 23, 1926

Dear Fielding:

Thanks for your note about Sudhoff's review, which I have just looked up. It is very kind of the old man to have written such a pleasant and feeling note about it.

I hope you have had a good summer, and wish I might have seen something of you. We have had a beastly time, what with Bill's death last June,[1] and an accident to one of our daughters who got thrown out of a car; and Henry with appendicitis. But still we're hanging on, and find much to live for thanks to our friends.

I am sending you a copy of my Edinburgh lectures, with my warm regards.

Always affectionately yours,

HARVEY CUSHING

[1] This letter refers to the tragic death by accident of the only son of Dr. Harvey Cushing.

MEDICAL HISTORY IN CENTRAL AND SOUTH AMERICA

HENRY E. SIGERIST

In 1939 the American Association of the History of Medicine, anxious to establish friendly relations with similar organizations of the southern hemisphere, appointed a *Committee on Relations with Central and South America.* Its function was to make contacts with scholars of Latin America working in the same field.[1]

Medical history was cultivated by scholars of both Americas for over a century, but there can be no doubt that in the past we did not know each other sufficiently. For reasons of cultural heritage the Latin republics of America were oriented towards Spain, Portugal, Italy and France, while we naturally tended toward England and Germany. Today the political situation of the world has made us realize that we are inhabitants of the same continent and that we have much more in common that we usually assume. We are all young nations, with all the advantages and disadvantages of such. Transplanted from Europe to a large and unopened continent, we did not merely continue European traditions. In colonizing and developing the Atlantic and Pacific coasts, the valleys of the river La Plata, the Amazon and the Mississippi, we were brought face to face with problems that were unknown to the Old World. We were forced to develop a pioneer spirit in order to solve them. In South and North new nations were born with distinct physiognomies of their own.

Different as our nations may be, yet they were built upon the same cultural foundations. Spain and England were Roman colonies once. Greek and Roman writers are classics to all of us. Mediaeval civilization was universal, and we had the great experience of the Renaissance in common. We in the medical field are still closer to each other. We are fighting shoulder to shoulder the same enemy. Hippocrates, Vesalius, Harvey, Morgagni, Pasteur, Ramón y Cajal

[1] *Bulletin of the History of Medicine*, 1939, Vol. VII, p. 843 f.

are our common ancestors. We worship them without asking to what country they belong. They belong to the world.

The time has come for the republics of the Americas to develop close intellectual relations, and the American Association of the History of Medicine wishes to contribute its share.

The following report is a first attempt to survey the field of medico-historical studies in Latin America. It is by no means complete, but merely reviews a few books that have been brought to the attention of the Johns Hopkins Institute of the History of Medicine during the last few years. It is published in spite of its deficiencies and gaps to serve as a starting point. In the future the *Bulletin of the History of Medicine* will report regularly about developments in the field of medical history in Latin America.

Argentina

The Public Library of Buenos Aires was founded in 1810. It was the precursor of the National Library, and among the books donated at the time by Moreno, Belgrano, and Saavedra were many valuable medical books.

The Academy of Medicine was founded in 1822, and one article of its constitution required that it "collect the communications presented monthly by the practising members of the Academy which contain the descriptive history of the diseases that prevailed in the preceding month, their treatment and its result, so as to build up in the course of time the medical history of the country."

In 1852 Dr. Nicanor Albarellos was appointed Professor of Forensic Medicine, General Pathology and History of Medicine at the University of Buenos Aires. He was succeeded in 1876 as Professor of General Pathology and History of Medicine by Dr. José Teodoro Baca. Medical history was dropped from the curriculum in 1880, but the subject was still cultivated by eminent scholars who wrote valuable monographs, particularly on the history of medicine in Argentina.

A new and extremely promising development set in during the last decade. In 1936 the National Academy of Medicine appointed a special Committee on the History of Medicine consisting of Nicolás Lozano, Lucas Arrayagaray, Gregorio Aráoz Alfaro, Juan

A. Domínguez, Marcelino Herrera Vegas and David Prando. A Society of the History of Medicine was organized as a constituent of the Medical Association of Argentina, and in 1937 a chair and department of the History of Medicine were created at the University of Buenos Aires. Professor Juan Ramón Beltrán was appointed to the chair and delivered his inaugural address on July 1, 1937. The department is housed at Calle Azcuénaga 923. It has offices, a lecture hall, a research library, bibliographical files and biographical archives of Argentine physicians. A museum is being prepared. Professor Beltrán from the very beginning organized instruction and research in an exemplary way. He delivers every year a lecture course and holds a seminar, the purpose of which is to teach young people methods of historical research. In 1937 the seminar was devoted to a study of the medical content of historical sources of Argentina and in 1938 to a study of Hippocrates. The seminar is, in addition, addressed by various scholars who present to it the results of their original researches. Professor Beltrán has also organized an Ateneo de Historia de la Medicina, which we would call a medical history club, that holds monthly meetings at which papers are presented and discussed.

In its research work the department undertook a systematic investigation of the National Archives and of the Archives of the Faculty. In 1938 Professor Beltrán launched a medico-historical series *Publicaciones de la Cátedra de Historia de la Medicina* of which four volumes have been issued so far.[2] In order to give an idea of the wealth of materials contained in the first volume published in 1938, I am reproducing the table of contents:

Juan Ramón Beltrán, Introducción al estudio de la historia de la medicina
Juan Ramón Beltrán, Síntesis histórica de la Academia Nacional de Medicina de Buenos Aires
Gumersindo Sánchez Guisande, Datos para la historia de la anatomía en España (Siglos xiv al xvi)
Máximo Soto Hall, La medicina, la terapéutica y la higiene entre los mayas
Juan U. Carrea, Los primeros odontólogos diplomados en la Argentina

[2] *Universidad de Buenos Aires, Publicaciones de la Cátedra de Historia de la Medicina.* Dirigidas por el Dr. Juan Ramón Beltrán. Buenos Aires, Imprenta de la Universidad, Tomo I, 1938; Tomo II (Fascículo I and II), 1939; Tomo III, 1940; Tomo IV, 1940.

Juan Miguel Márquez Miranda, Historia de la anestesia
Aurelia Alonso, Fundación de la Casa de Expósitos
José María Fiorini, Algunos aportes para la historia de la odontología en la Argentina
Aníbal Ruiz Moreno, Organización colonial del Hospital de Mujeres
Miguel F. Méndez Trongé, Higiene y condiciones sanitarias en la expedición de Ortiz de Zárate
Alberto Claro, Un caso de ética profesional en 1772
Raul Pastorini, Apuntes para la historia de la cátedra de ginecología de la Facultad de Ciencias Médicas de Buenos Aires

Volume II was issued in 1939 in two parts of which the first gives a very interesting detailed report of the organization and activities of the department, while the second part contains the correspondence of Miguel Gorman, a result of the department's archive studies. Gorman was the medical pioneer in the Viceroyalty of La Plata, which was established in 1776 and embraced the whole southern section of the continent. He was the first Protomédico when the Viceroyalty's health administration became independent of that of Peru. His correspondence reflects the early history of medicine in the La Plata valley, and supplements in a most fortunate way Professor Beltrán's classical History of the Protomedicato of Buenos Aires, published in 1937.[8]

Volume III, issued in 1940, contains the following papers presented before the Seminar and Ateneo of the department:

Pedro Ara, El sabio español Santiago Ramón y Cajal en la Neurología Anatómica
Juan Ramón Beltrán, Los servicios médicos en el combate de San Lorenzo
Josué A. Beruti, La personalidad de Semmelweis
Nicolás Besio Moreno, Historia de las epidemias de Buenos Aires. Estudio demográfico estadístico
Guillermo Bosch Arana, Historia de la hemostasia
Ricardo Caballero, Explicación de algunos libros hipocráticos
Octavio C. Fernández, Historia de la kinesiología
Carlos Fonso Gandolfo, La epidemia de fiebre amarilla de 1871
Enrique François, Medicina y Filología

[8] Juan Ramón Beltrán, *Historia del protomedicato de Buenos Aires. Estado de los conocimientos sobre medicina en el Río de la Plata, durante la época colonial. Los galenos españoles y los magos o curanderos indígenas. Antecedentes históricos y legales de la fundación del protomedicato y de la Escuela médica de Buenos Aires.* Buenos Aires: El Ateneo, 1937.

Avelino Gutiérrez, La anatomía, como modelo práctico para la enseñanza de las demás ciencias médicas

Juan B. Lastres, Cómo se trataban las enfermedades nerviosas durante la colonia

Gregorio Marañón, España fuera de España. Divagaciones sobre un libro de historia

Carlos Robertson Lavalle, Rumbo biológico en el tratamiento de la tuberculosis

Angel H. Roffo, Evolución histórica del cáncer

José Torre Revello, El sevillano Nicolás Monardes y sus libros de medicina americana

Volume IV, just issued, contains a series of papers and dissertations written by Professor Beltrán's colleagues, students and associates:

José Arce, El Instituto del cáncer. Un episodio en la vida de la Universidad de Buenos Aires

Juan Ramón Beltrán, Los estudios médicos en el Colegio San Fernando, de Lima, en 1808

Carlos Martínez Durán, Evolución de la cirugía en Guatemala

Carlos Robertson Lavalle, Historia del tratamiento quirúrgico de la tuberculosis pulmonar

Guillermo V. Stuckert, Páginas de la historia hospitalaria de Córdoba

Hernan D. Aguilar, Historia del tratamiento quirúrgico de la tuberculosis pulmonar, en la República Argentina

Natalia M. Sales de Cogorno, Historia de la terapéutica hidromineral en la República Argentina

Celestino Jorge Lebron, Albores de nuestro periodismo médico: Los estudios del ex jesuita Sexismundo

José María Leiro, Singular ordenanza de 1545: La pena del dedo cortado

Felix M. Lopez, Los primeros disectores anatómicos

Guido Ruiz Moreno, El Instituto de Historia de la Medicina de la Universidad Johns Hopkins

Prof. Beltrán is a brilliant historian and a great teacher who in a short time succeeded in creating a regular school of promising young medical historians. One of his most talented associates is Dr. Aníbal Ruiz Moreno who was head of the Seminar of the department and is now associated with Prof. Beltrán as candidate for a chair in the history of medicine. He recently published three monographs, two of which deal with health activities of the Jesuit missions in the early Colonial days. Alcoholism was widespread

among the Indians of South America before the conquest.[4] In times of festivals large quantities of chicha, a corn liquor and guaropo, a liquor made from wild honey, were consumed. The Jesuits conducted a campaign against alcoholism by educating the people, punishing them for abuses, by introducing a beverage made from the yerba mate, by reducing the alcoholic content of liquors and similar measures. In a second monograph Dr. Ruiz Moreno examines the public health aspects of the pueblos erected by the Jesuit missionaries.[5] His third study that has been published quite recently is devoted to medicine in Graeco-Roman mythology and examines the health attributes and health functions of the various ancient deities.[6] Dr. Ruiz Moreno has founded a Society of the History of Medicine in La Plata of which he is president.

Another of Prof. Beltrán's disciples, Dr. Guido Ruiz Moreno, visited our Institute at the Johns Hopkins University and wrote a very generous report on its activities.[7] He unfortunately came at a moment when I was on the Pacific coast, but I recently had the pleasure of welcoming Dr. José María Leiro who brought a letter expressing the sympathy and friendship of the medical students of the University of Buenos Aires to the medical students of Johns Hopkins. Dr. Leiro is at present head of the Seminar of Medical History. He has written various historical papers and a brilliant dissertation on Endemic Goiter in the Alto Paraná.[8]

The Universidad Nacional del Litoral, founded in 1920 in Santa Fe with a medical branch in Rosario, established a library of classical medicine as an annex to the medical library of the school.[9] In 1929

[4] Aníbal Ruiz Moreno, *La lucha antialcohólica de los Jesuítas en la época colonial.* Buenos Aires, 1939.

[5] Aníbal Ruiz Moreno, *El urbanismo en las misiones Jesuíticas.* Buenos Aires, 1940.

[6] Aníbal Ruiz Moreno, *La medicina en la mitología Grecorromana.* Buenos Aires: El Ateneo, 1940.

[7] Guido Ruiz Moreno, El Instituto de Historia de la Medicina de la Universidad Johns Hopkins, *Universidad de Buenos Aires, Publicaciones de la Cátedra de Historia de la Medicina,* 1940, Tomo IV, pp. 277-290.

[8] José María Leiro, *Bocio endémico en el Alto Paraná.* Tesis de Doctorado en Medicina, Universidad de Buenos Aires, Facultad de Ciencias Médicas, Escuela de Medicina, Instituto de Enfermedades Infecciosas José Penna, Acta No. 4958, 1937.

[9] J. Andrés Codazzi Aguirre, *Fuentes históricas de la Medicina antigua existentes*

a chair and department of the History of Medicine and Medical Doctrines were created at the instigation of the learned senator and physician Ricardo Caballero. Its purpose was "to restore the philosophic character of the medical studies that had been lost." Senator Caballero, well known for his studies on Hippocrates and for addresses that reveal a humanistic spirit, was the first appointee to the chair. His method of instruction has been described by his associate Andrés Codazzi Aguirre who is at present head of the Seminar.[10] Instruction is entirely based on the classics of medicine. The students must all become intimately acquainted with the great masters of the past, studying their writings, if ever possible in the original or in translations. A course of lectures gives orientation to the studies and in the Seminar the students are instructed in the handling of ancient texts and in the preparation of papers. All students write papers on some subject of the history of medicine and in 1938 not less than 334 students of medicine and dentistry took an active part in the work of the Seminar. The department will gradually develop into a regular institute and the creation of a museum of medical history is being considered.

The Universidad del Litoral cultivates not only the history of medicine but also the history of science. In the Faculty of Industrial and Agricultural Chemistry Professor Horacio Damianovich has a chair for the Methodology and History of Science, and in 1939 an Institute of the History and Philosophy of Science was created. My old friend, Aldo Mieli, Permanent Secretary of the International Academy of the History of Science was called from Paris and put in charge of the new Institute. Professor Mieli has recently issued as Number 1 of the publications of the Institute a pamphlet in which he traces the development of studies in the history of science the world over and outlines his program.[11] The center of the Institute

en la Biblioteca de Medicina Clásica de la Facultad de Ciencias Médicas de Rosario. 1938.

[10] J. Andrés Codazzi Aguirre, *Didáctica de la Historia Crítica de la Medicina.* Buenos Aires: El Ateneo, 1939. Previous historical publications of Dr. Codazzi Aguirre were: *Más allá del ultramicroscopio,* Librería y Editorial Ruiz, Rosario, 1937; *El legado de Hipócrates,* Librería y Editorial El Ateneo, Buenos Aires, 1938.

[11] Ministerio de Justicia e Instrucción Pública, Universidad Nacional del Litoral, Instituto de Historia y Filosofía de la Ciencia. Publicación N.° 1. *Sumario:*

will be its library with collections attached to it. Prof. Mieli's journal *Archeion,* founded in Rome in 1919, is now being published as the joint organ of the Institute and of the International Academy. Prof. Mieli hopes to develop the Institute not only into a center of research and instruction for the university, but into a postgraduate school in which scientists and historians from various countries will receive the supplementary instruction which they so badly need and find facilities for research.

The history of science is also taught at the Universidad de la Plata where Professor Alberto Palcos gives a course on the theory and history of science.

Various other important studies have come from Argentina in the last few years, among which is a beautiful biography of Dr. Juan Madera (1782-1829) who in 1810 was first surgeon to the expedition sent out for the liberation of Peru, who was one of the first fifteen members of the Academy of Medicine of Buenos Aires and the first Professor of Materia Medica in the University. He also was a pioneer in the introduction of vaccination. His life was written by one of his descendants Luciano Abeille.[12]

Another interesting biography published by the National Academy of Medicine of Buenos Aires describes the life of Juan B. Señorans, who introduced experimental medicine into Argentina. It was written by Bernardo A. Houssay, the present Professor of Physiology in the University, and Alfredo Buzzo.[13] Señorans' life reminds us of that of many of our American medical scientists of the period. Born in 1859, he was educated at his home university and went abroad for postgraduate work. He was in Paris first in 1883, then until 1885 in London and Geneva. He worked in the laboratories of all the distinguished physiologists of the day and in 1886 upon his

Documento N.° 1. Ordenanza creando el Instituto de historia y filosofía de la ciencia. Documento N.° 2. Resolución nombrando Director del Instituto al Prof. Dr. Aldo Mieli. Aldo Mieli, El desarrollo histórico de la historia de la ciencia y la función actual de los Institutos de historia de la ciencia. Santa Fe, República Argentina, 1939. See also *Archeion,* 1940, Vol. XXII (Nueva Serie I) pp. 1-41.

[12] Luciano Abeille, *Etapas de la vida medical del Doctor Juan Madera, Prócer de Mayo.* Buenos Aires, 1939.

[13] Bernardo A. Houssay and Alfredo Buzzo, *Juan B. Señorans, Iniciador de la Medicina Experimental en la República Argentina.* Academia Nacional de Medicina de Buenos Aires, Buenos Aires, 1937.

return to Argentina introduced the new methods of experimental medicine into his country.

On the occasion of the tercentenary of the publication of Descartes' *Discourse on Method*, the Institute of Philosophy of the University of Buenos Aires published a memorial volume to which Prof. Houssay contributed a very enlightening essay on Descartes' physiology and medicine.[14]

In October 1938 the Sixth National Medical Convention was held in Córdoba with a section devoted to the History of Medicine. Eleven official reports were presented and 15 papers read.

The Convention at its final plenary session passed five resolutions:

1. It recommended the history of medicine as a subject of instruction to those medical schools that have not yet made provisions for it.

2. The national authorities were urged to include health data in the next census so that the nosological map of the country could be established.

3. The medical schools of the country were advised to erect museums of medical history.

4. The federal, provincial and local authorities were advised to organize their archives in such a way that they could be used for studies in the history of medicine.

On the occasion of the Convention the secretary of the National Academy of Science in Córdoba, Enrique Sparn, published a volume on the chronology, differentiation, membership and geographic distribution of medical societies throughout the world which is far from being accurate or complete.[15] It is the ninth volume in a series in which the same author has studied other scientific societies.

[14] Bernardo A. Houssay, *La Fisiología y la Medicina de Descartes.* In: Universidad de Buenos Aires, Facultad de Filosofía y Letras, Instituto de Filosofía, *Descartes, Homenaje en el Tercer Centenario del "Discurso del Método."* Buenos Aires, 1937, pp. 33-55.

[15] Academia Nacional de Ciencias, Miscelánea N.° 23; Homenaje al VI° Congreso Nacional de Medicina (Córdoba, octubre 16-21, 1938): Enrique Sparn, *Cronología, diferenciación, matrícula y distribución geográfica de las sociedades de ciencias médicas.* Córdoba, 1938.

Brazil

Center for studies in the history of science and medicine in Rio de Janeiro is the *Academia Brasileira de Historia das Ciências* (Nucleo Central-Rio de Janeiro).[16] It functions as national section of the International Academy of the History of Science. The history of medicine is represented in the Academy by the following scholars:[17]

Prof. Raul Leitão de Cunha. Professor of Anatomy and Pathological Physiology at the Facultade de Medicina do Rio de Janeiro, Rector of the Universidade do Brasil. Rua do Ouvidor, 169-6.° Corresponding Member of l'Académie Internationale d'Histoire des Sciences. Member of the Council of the Academia Brasileira de Historia das Ciências. Res. Rua das Palmeiras, 52—Botafogo—Rio.

Prof. Luiz Affonso de Faria. Professor at the Facultade de Farmacia e Odontologia de Nictheroy (Estado do Rio). Chief of the Analytic Section of the Laboratorio Bromatologico do Serviço de Saúde Publica. Rua Camerino, 26—Rio de Janeiro. Corresponding Member of l'Académie Internationale d'Histoire des Sciences. Secretary General of the Academia Brasileira de Historia das Ciências. Res. Rua Magalhães Couto, 112. Meyer—Rio.

Prof. Cl. Jesuino de Albuquerque. Secretary General of the Service of Saúde e Assistencia do Districto Federal—Praça Floriano—Rio. Director of the Brazilian Red Cross. Treasurer of the Academia Brasileira de Historia das Ciências. Res. Rua Gomes Carneiro, 28. Copacabana—Rio de Janeiro.

Prof. Antonio Cardoso Fontes. Professor at the Facultade de Ciências Médicas. Rua Ulisses Veiga 25. S. Cristovam. Rio. Director of the Instituto Oswaldo Cruz—Manguinhos—Rio de Janeiro. Res. Rua Senador Vergueiro, 23—Rio.

Prof. Arthur Neiva. Member of the Instituto Oswaldo Cruz—Manguinhos. Former Director of the Museu Nacional. Quinta de Bôa Vista. Res. Av. Epitacio Pessôa, 2.170—Lagôa Rodrigo de Freitas.— Rio.

Prof. Arthur Moses. Former member of the Instituto Oswaldo Cruz—Manguinhos. Former Director of the Academia Brasileira de Ciências—Director of the Laboratorio Moses—Rua do Rosario, 134—Rio. Res. Rura Muniz Barreto, 54—Botafogo—Rio.

Prof. Antonio Austregesilo Rodrigues Lima. Professor of Clinical Neurology at the Facultade de Medicina da Universidade do Brasil. Former

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[16] See *Archeion*, 1940, Vol. XXII (Nueva Serie I), pp. 194-198.

[17] The list is from *Archeion, loc. cit.*

President of the Academia de Medicina—Silogeu Brasileiro—Lapa. Rio. Former President of the Academia de Letras—Cons. Rua Cesario Alvim, 33—Rio—Res. Rua Salvador Corrêa, 120. Copacabana—Rio.

Prof. Dr. Afranio Peixoto. Professor at the Facultade de Medicina da Universidade do Brasil—Former Director of the Hospicio de Alienados. Former President of the Academia de Letras. Former Director of the Instrução Pública. Res. Rua Paysandú, 97. Rio.

Prof. Aloysio de Castro. Clinical Professor at the Facultade de Medicina da Universidade do Brasil. President of the Academia Nacional de Medicina. Former President of the Academia de Letras. Res. Rua D. Marianna, 16—Botafogo.

Dr. Jorge de Lima. Cons. Praça Floriano, 55, Rio. Res Travessa Umbelina 14—ap. S. João.— Botafogo—Rio.

Prof. Miguel Ozorio de Almeida. Former President of the Academia de Ciências—President of the Comissão de Cooperação Intelectual do Ministerio das Relações Exteriores. Res. Estrada do Açude, 66. Tijuca—Rio.

Prof. Alvaro Ozorio de Almeida. Professor at the Facultade de Medicina da Universidade do Brasil. Res. Rua Salvador Corrêa, 17. Capacabana—Rio.

Prof. Edgard Roquette Pinto. Former Director of the Museu Nacional. Director of the Services of the Cinema Educativo. Rua da Carioca, 45—3.° Res. Av. Beira-Mar, 210—Flamengo—Rio.

Prof. Candido de Mello Leitão. Professor at the Facultade de Filosofia da Universidade do Brasil. Head of a Division at the Museu Nacional—S. Christovam—Rio. Res. Rua do Russell, 164. Rio.

Prof. Lauro Travassos. Instituto Oswaldo Cruz-Manguinhos. Rio. Res. Rua Conde de Iraja, 141—Botafogo. Rio.

In S. Paulo Dr. Flavio Maurano is planning the organization of an institute of the history of medicine. In 1939 he published a very comprehensive History of Leprosy in S. Paulo in two volumes.[18] The book is written in Portuguese, but has at the end summaries in English, French and German. The disease did not exist in pre-Columbian America. It was introduced, not by negroes, but by the Portuguese and was widespread 200 years ago. Since the lepers were beggars, they crowded into the more prosperous sections of the province. Until 1900 little was done to combat the disease. There

[18] Serviço de Profilaxia da Lepra, Departamento de Saúde do Estado de S. Paulo (Brasil) : Flavio Maurano, *Historia da Lepra em S. Paulo*, (3.ª Monografia dos Arquivos do Sanatorio Padre Bento). 2 Volumes, S. Paulo, 1939.

were two inadequate hospitals in S. Paulo and Itu which did not provide more than mere shelter to the sick. Charitable organizations attended the lepers, whose condition was very much as it had been in mediaeval Europe. After 1900 a regular campaign was inaugurated and today all lepers of the province are segregated into three large leprosaria equipped with all facilities for treatment, work, gymnastics and games.

The quarterly journal *Anais da Faculdade de Medicina de Pôrto Alegre* of which the first number has been received, contains occasional historical papers.

Chile

The Universidad de Chile in Santiago has at present no regular chair for the history of medicine, but Dr. Juan Marín taught medical history in that university before he was appointed Ambassador of Chile to China. We hear that two members of the present faculty are particularly interested in historical studies, Dr. Armando Larraguiber, Professor of General Pathology and Dr. Ernesto Prado Tagle, Professor of Clinical Medicine.

In the Universidad de Concepción Dr. Cristóbal Martín is Professor of Medical History.[19]

A special issue of the *Prensa Médica* has just been received which was published in commemoration of the 50th anniversary of the hospital of Viña del Mar.[20] Like many similar institutions in the Old and in the New World the hospital took its origin as an almshouse, founded in Valparaiso in 1850. It was moved to Viña del Mar in 1878 and in 1889 an infirmary was added to it with 12 beds for men and 12 for women. Both institutions grew to a capacity of 340 beds in 1930. The turning point in the history of the hospital was the year 1933 when Dr. Gustavo Fricke was appointed its Director. The institution grew, one department after another was added to it, including a center of preventive medicine. The institution had 534 beds in 1939 and now plans are being made for a new building that will be the last word in hospital construction.

[19] *Minerva*, 1938, Abt. Universitäten und Fachhochschulen, Bd. II, p. 790.

[20] Hospital de Viña del Mar, 1890-1940, *Prensa Médica*, Valparaíso (Chile), 1940, Nos. 22, 23, 24.

Colombia

The Universidad Nacional de Bogotá has a chair of the history of medicine but we have no information about it.[21]

Cuba

From Havana has recently come a very charming biography of the French clinician Bretonneau, warmly written by Dr. J. F. Rodríguez Pérez.[22]

Guatemala

Guatemala has a very distinguished historian of medicine in Dr. Carlos Martínez Durán who is Profesor of Histology at the Universidad de San Carlos in Guatemala. A scientist and humanist, he has repeatedly stressed the necessity for a chair of medical history, emphasizing that the purpose of the university is not only to train professional men and scientific researchers but also to transmit culture and to develop a humanistic superstructure without which the professional man remains a mere technician.

Prof. Martínez Durán is preparing a comprehensive History of Medicine in Guatemala of which the first volume is in print. In a previous study issued in 1936 on the occasion of the Fourth Central American Medical Congress, Prof. Martínez Durán already published some of the results of his archive researches. The pamphlet gives an outline of colonial medicine in Guatemala and is packed full of facts.[23] The first hospital was founded in 1527. The university, named after San Carlo Borromeo in honor of Charles II of Spain, was established in 1680 and followed the pattern of Salamanca. In 1686 a graduate of Alcalá, Don Miguel Fernández, was appointed first Professor of Medicine. In the 18th century European experimental physiology was introduced and Dr. Avalos y Porras demonstrated the circulation of the blood. The Protomedicato was established in 1793 and the first to hold this office was

[21] See Aldo Mieli, *l. c.*, p. 29.

[22] J. F. Rodríguez Pérez, *Bretonneau.* Habana, La Propagandista, 1938.

[23] Carlos Martínez Durán, *Síntesis de la Medicina Colonial en Guatemala.* Trabajo presentado en el IV Congreso Médico Centroamericano, celebrado en Guatemala en el Mes de Noviembre de 1936. Guatemala, C. A., Sánchez y De Guise, 1936.

José Felipe Flores who, with the surgeon Narciso Esparragosa y Gallardo, was one of the most outstanding medical figures of the time. The Colegio de Cirugía was founded in 1704.

In two addresses published in 1939 Prof. Martínez Durán discussed phases of the history of medical education at the Universidad de San Carlos [24] and in 1940 he published a study on the history of typhus in Guatemala.[25] The disease called tabardillo or febre petequial was endemic in the country already before the Conquest, particularly in the high and cold regions.

Mexico

Mexico had some very distinguished historians of medicine in the past. The best known among them were Francisco A. Flores who in 1886 wrote a three volume History of Medicine in Mexico, and Nicolás León who died in 1929. León was a very colorful personality. Physician, scientist, teacher and historian, he founded several museums and wrote over 400 papers and books that cover wide fields of medicine, anthropology, general history and medical history. The Academy of Medicine of Mexico of which he was the 38th president paid him a warm tribute in its June session of 1940 on the occasion of the unveiling of his portrait.[26] Both of these men are dead now, but important contributions have come from Mexico in recent years also. In 1933 Maximino Martínez published a very important work on the medicinal plants of Mexico [27] that is full of historical information, and a new History of Medicine in Mexico was written in 1934 by Fernando Ocaranza.[28]

Among the younger historians of medicine is José Joaquín Izquierdo who at present is Professor of Physiology at the University and at the Medical Military School. In 1934 he wrote an excellent

[24] Carlos Martínez Durán, *Dos Conferencias.* CCLVIII Aniversario de la fundación de los estudios médicos en la Universidad de San Carlos de Guatemala. Guatemala, C. A., Sánchez y De Guise, 1939.

[25] Carlos Martínez Durán, *Las Epidemias de Tifus en Guatemala, según Juicios de Médicos y Profanos de Antaño.* Guatemala, Sánchez y De Guise, 1940.

[26] Homenaje al Dr. Nicolás León, 38° Presidente de la Academia Nacional de Medicina, *Gaceta Médica de México,* Tomo LXX, No. 5, Oct. 31, 1940, pp. 527-540.

[27] Maximino Martínez, *Las Plantas Medicinales de México.* Mexico, 1933.

[28] Fernando Ocaranza, *Historia de la Medicina en México.* Midy Press, 1934.

History of Physiology in Mexico [29] which actually gives much more than the title announces. Since physiology was chiefly cultivated at the University, Prof. Izquierdo in order to trace the background of his subject tells us a great deal about the history of this old American university. The Real y Pontificia Universidad de México was founded in 1553, and from the establishment of the chair Prima de Medicina in 1580 on, medicine was always cultivated in that university. In 1936 Prof. Izquierdo published a splendid volume on Harvey.[30] It contains an excellent study on the founder of the experimental method in medicine, a facsimile of the *Exercitatio* and the first Spanish translation of this great classic.

The National Academy of Medicine in Mexico has a section for the History of Medicine of which Dr. Benjamín Bandera is chairman. It seems, however, that the history of medicine is not yet a subject of instruction in Mexican universities.

Peru

The history of medicine has several outstanding representatives in Peru. Most eminent among them is Professor Carlos Enrique Paz Soldán who is Professor of Hygiene at the University, Director of the Institute of Social Medicine and Editor of the journal *La Reforma Médica*. A hygienist of international reputation, a specialist in problems of rural health and child welfare, an indefatigable writer, Prof. Paz Soldán has succeeded in combining his medical, sociological and historical interests in a most happy way. In 1939 he organized the Sociedad Peruana de Historia de la Medicina which under his presidency has become a flourishing center of medico-historical studies. The Society foresees the establishment of a library, a museum and a journal. It will organize exhibits and regular courses besides holding monthly meetings. It already has over 100 members.

Prof. Paz Soldán has insisted repeatedly that the history of

[29] José Joaquín Izquierdo, *Balance Cuatricentenario de la Fisiología en México*. Mexico, 1934.

[30] José Joaquín Izquierdo, *Harvey, Iniciador del Método Experimental*, Estudio crítico de su obra "De Motu Cordis" y de los factores que la mantuvieron ignorada en los países de habla española, con una reproducción fascsimilar de la edición original y su primera versión castellana. Mexico, 1936.

medicine is not a luxury, that we must be aware of our past if we want to prepare the future intelligently. His broad historical approach is illustrated beautifully by an address he made before the Peruvian Society of the History of Medicine in April 1940[81] where he said, "Only those nations are great that are able to remember the past. The historical experience is the collective remembrance that elevates every man beyond the pettiness of his instincts and passions toward the lofty heights of unselfishness." In the same address he discusses the history of mining legislation in Peru and shows how much can be learned from it for the present. "Unless we know what was, we cannot march toward the future with any certainty." And in another passage he says, "Our apparent admiration of the past is in reality a measure of precaution in directing our actions toward the future."

Prof. Paz Soldán has written a large number of monographs among which are A Hundred Years of Maritime Sanitary Policy in Peru, The Medico-Social Preoccupation of Spain in the Colonial Period, Four Centuries of Medicine in Lima, The Tertian Fevers of the Conde de Chinchon.[82] His most recent book is a new edition of Hipólito Unanue's classical Observations on the Climate of Lima and Its Influence on Living Beings and Particularly on Man to which Prof. Paz Soldán has contributed a most illuminating introductory study of 98 pages.[83] Unanue (1755-1833), whose statue stands in front of the University, was the first great physician, medical teacher and patriot of Peru. His influence was profound. He reorganized medical education after the pattern of the medical school of Leiden and founded the Colegio de Medicina de San Fernando. He was a medical statesman who approached the problems of health and disease from a broad sociological angle. It is no wonder that Prof. Paz Soldán felt attracted by a personality with which he is related

[81] *La Reforma Médica*, May 1, 1940, pp. 287-290.

[82] Carlos Enrique Paz Soldán, *Cien años de política sanitaria marítima en el Perú; Las preocupaciones médico-sociales de España durante la colonia; Cuatro siglos de medicina limense; Las tercianas del Conde de Chinchon* (1938). Cf. *Who's Who in Latin America*, ed. Percy Alvin Martin, Stanford University Press, 1940, pp. 383-384.

[83] Comisión Nacional Peruana de Cooperación Intelectual: Hipólito Unanue, *Observaciones sobre el clima de Lima y su influencia en los seres organizados, en especial el hombre*. Introducción y comentarios por el Dr. D. Carlos Enrique Paz Soldán. Lima, 1940.

by many spiritual bonds. Unanue first published his work on the climate in Lima in 1806. A second edition was issued in Madrid in 1815 from which the present reprint has been made. The book is a classic of medical geography. It describes the climate, studies its influence on plants, animals and man, discusses the influence on mental and physical diseases and then indicates means of curing the ailments that are due to the climate. The last section is a study of the medical constitution of Lima in the year 1799.

Peru has another distinguished historian of medicine in Dr. Juan B. Lastres who is Professor of Clinical Medicine in the University and also teaches anthropology, and in addition is an eminent psychiatrist and historian. In 1933 he published a monograph on The Biological Thought of Unanue and Some Considerations on the Climate.[34] It was followed two years later by another monograph in which the author studied the neurological history of the pre-Inca and Inca period of Peru.[35] His most recent book continues these studies into the Colonial Period.[36] It begins with a study on the medico-social environment in the colony, the causes of nervous diseases such as sex life, syphilis, alcoholism, etc. and then discusses in a series of chapters the chief diseases that occurred, their folklore and treatment. The book is entirely based on original sources.

Prof. Lastres' latest papers are a study of the historical work of Hermilio Valdizán, a Peruvian psychiatrist who wrote important historical monographs and bibliographies on various aspects of Peruvian medicine,[37] and a study on earthquakes, hospitals and epidemics in colonial Lima.[38]

Uruguay

In Uruguay the leading figure in medical history is Prof. Rafael Schiaffino who like many others succeeds in combining studies in

[34] Juan B. Lastres, *El Pensamiento Biológico de Unanue y Algunas Consideraciones sobre el Clima.* Lima, 1933.

[35] Juan B. Lastres, *Investigación Histórica del Pasado Nervioso Peruano.* Lima, 1935.

[36] Juan B. Lastres, *Las Enfermedades Nerviosas en el Coloniaje.* Lima, 1938.

[37] Juan B. Lastres, *La Obra Histórica de Hermilio Valdizán.* Trabajo leído en la Sociedad Peruana de Neuro-Psiquiatría el día 23 de Diciembre de 1939 conmemorando el décimo aniversario de su muerte. Lima, 1940.

[38] Terremotos, Hospitales y Epidemias de la Lima Colonial, *Archeion*, 1940, Vol. XXII (Nueva Serie T. I), pp. 141-153.

medical history with public health work. This frequently found combination is by no means accidental. Public health, more than any other medical field, requires statesmanship from its leaders, and statesmanship is rarely found where there is no historical understanding. Public health, moreover, always touches deep sociological problems and there is no sociology without history.

Prof. Schiaffino is at present Director of Hygiene in the Ministry of Public Health. He also teaches at the Universidad de la República in Montevideo and is a member of the Instituto Histórico y Geográfico. His magnum opus is a monumental History of Medicine in Uruguay of which two volumes have been published so far.[39] The first volume of 563 pages issued in 1927 discusses the Spanish background, medicine at the time of the Conquest, the aborigines and their medical lore, medicine in the missions, and finally medicine as it is reflected in the literature of the herbalists, the historians and other writers. The second volume of 611 pages published ten years later presents a broad picture of medicine during the colonial period. Until Uruguay became an independent republic in 1828 it was a bone of contention between Spaniards and Portuguese. Its colonial history is therefore closely connected with that of its neighbors.

In 1680 the Portuguese built a fort on the La Plata river, the Colonia de Sacramento. They were driven out by the Spaniards in 1705, and Prof. Schiaffino published in 1929 the fascimile of a rare old text describing these events.[40]

In all colonies the problem of supplying the settlements with fresh water was a determining factor. The Portuguese intended to found Montevideo in 1701 but gave it up because they could not find fresh water in the vicinity. The Spaniards did find water and built Montevideo in 1724 as a Spanish colony. Prof. Schiaffino wrote, in 1937, a medico-archeological study on the Springs of Montevideo which is a model of its kind.[41]

In 1938 Prof. Schiaffino published the Memoirs of an Argentine

[39] Rafael Schiaffino, *Historia de la Medicina en el Uruguay*, Tomo I, Montevideo, 1927; Tomo II, Montevideo, 1937.

[40] Rafael Schiaffino, *Relación del Sitio y Toma de la Colonia del Sacramento por las Tropas Españolas en 1705*, Montevideo, 1929. Also *Revista del Instituto Histórico y Geográfico del Uruguay*, Tomo VI, N.° 1, 1928.

[41] Rafael Schiaffino, *Las Fuentes en Montevideo Colonial*, Montevideo, 1937. Also *Revista de la Sociedad Amigos de la Arqueología*, Tomo VIII, Años 1934-37.

lawyer, Augustín Gerónimo Ruano, that throws new light on the revolution of 1833, one of the many upheavals during the "Age of Rosas."[42] The most recent publication of Prof. Schiaffino is a biography of Teodoro M. Vilardebo (1803-1857), a very versatile personality, physician, biologist, palaeontologist, hygienist and historian. In addition to the biography the volume contains two diaries and several scientific papers of Vilardebo.[43]

Prof. Schiaffino has also written many studies on various aspects of public health and social medicine that I am happy to possess, but he is not neglecting his historical investigations. The third volume of his History of Medicine in Uruguay is announced as well as a monograph on Dr. José P. de Oliveira—Protomédico de la Cisplatina.

Fragmentary as this survey is, it makes evident the fact that there is a strong historical movement and a strong humanistic trend in Latin American medicine. It is to be hoped that the cooperation between the historians of medicine of the two Americas will become ever closer. At a time when the work of the International Society of the History of Medicine has been interrupted for who knows how long, we should consider a Pan-American congress of medical history. It could be held either independently or in connection with some other medical convention.

We must not let ourselves be deterred by the language. It is to our mutual advantage to learn our neighbor's tongue. Just because it is so different, it enriches our cultural equipment the more.

¡Atlántida encantada
Que Platón presintió! promesa de oro
Del porvenir humano—Reservado
A la raza fecunda,
Cuyo seno engendró para la historia
Los Césares del genio y de la espada—
Aquí va á realizar lo que no pudo
Del mundo antiguo en los escombros yertos—
¡La más bella visión de sus visiones!
¡Al himno colosal de los desiertos
La eterna comunión de las naciones!

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[42] Rafael Schiaffino, *Rosas y la Revolución de 1833, Según el Dr. Agustín Gerónimo Ruano*, Montevideo, 1938. Also *Revista del Instituto Histórico y Geográfico del Uruguay*, Tomo XIV, Año 1938.

[43] Rafael Schiaffino, *Vida y Obra de Teodoro M. Vilardebo (1803-1857), Médico y Naturalista, Higienista e Historiador*, Montevideo, 1940. Also *Revista del Instituto Histórico y Geográfico del Uruguay*, Tomo XV, 1939.

ANNOUNCEMENTS

International Society of the History of Medicine

A long letter was received from the President of the International Society, Dr. Victor Gomoiu. On May 20, 1940, Dr. Gomoiu was elected President of the College of Physicians of Roumania and on July 5, 1940, he was appointed Minister of Health and Social Welfare of his country. His term as President of the International Society would have expired under normal circumstances on February 6, 1940 and he would have been succeeded by Prof. Laignel-Lavastine of Paris. The unsettled conditions on the international scene have interrupted the activities of the Society, and the National Sections are grateful to Dr. Gomoiu for his carrying on until peace is restored.

The Society has lost through death its Treasurer, E. Boulanger-Dausse (Paris), its Adjunct Secretary, van Schevensteen (Antwerp), and the members of its Permanent Committee, Ricardo Jorge (Portugal), de Alcalde (Spain), and V. Maar (Denmark).

Number 6 of *Archives de la Société Internationale d'Histoire de la Médecine* was received and will be discussed at the Annual Meeting of our Association.

American Association of the History of Medicine

Preparations are being made for the *Seventeenth Annual Meeting* which will be held in Atlantic City, May 4-6, 1941. We are happy to announce that the St. Louis Medical Society has very kindly consented to lend us its *Paracelsus Collection.* This is a unique collection of Paracelsica, second only to that of the late Professor Karl Sudhoff. It was assembled by our member Dr. Robert E. Schlueter of St. Louis, who some time ago presented it to the St. Louis Medical Society. The Collection will be the backbone of our Paracelsus Exhibit.

The *Fielding H. Garrison Lecture* will be delivered by Dr. George Sarton, editor of *Isis*, on *The History of Medicine Versus the History of Art.*

The *After-Dinner Address* will be given by our Past-President, Dr. James B. Herrick of Chicago.

We are also working on the *Osler Medal* and hope to have it ready for the meeting. The full program of the meeting will be announced in the April number of the Bulletin.

Constituent Societies

The *Johns Hopkins Medical History Club* held its second meeting of the year on February 3, 1941. The following two papers were presented:

1. Interpretation of Certain Historical Features of Blood Transfusion,
   Dr. Bertram M. Bernheim.
2. The Pathology of the Books of Moses in the Light of the Ancient Egyptian Medical Papyri,
   Professor Abraham S. Yahuda.

The *Section on Medical History of the College of Physicians of Philadelphia* held a meeting on February 14, 1941. Dr. Henry E. Sigerist presented a paper on *The Social History of Public Health.* The Library of the College exhibited a number of old books illustrating the subject.

The *Section on the History of Medicine of the Richmond Academy of Medicine* held its annual meeting on February 11, 1941. Two papers were presented:

Ignorance and Medicine,
Dr. Andrew D. Hart, Jr., University of Virginia.

The Story of Appendicitis,
Dr. Reginald Fitz, Harvard University.

An exhibit of books by John Tennent was shown.

National News

History of Science Society

The Baltimore-Washington Branch of the History of Science Society and the Johns Hopkins Institute of the History of Medicine held a joint meeting in Baltimore on February 18, 1941. The speaker of the evening was Dr. Lancelot Hogben, F. R. S., Regius Professor

of Natural History, University of Aberdeen, who delivered a lecture on *Scientific Humanism*. The meeting was attended by over 300 members and guests.

New York Academy of Medicine

Paracelsus died 400 years ago, on September 21, 1541. First to commemorate the event was the New York Academy of Medicine which devoted the third of this year's Lectures to the Laity to it. Dr. Henry E. Sigerist discussed *Paracelsus in the Light of 400 Years*. A beautiful souvenir program with a short biography of Paracelsus and the portrait by Augustin Hirschvogel of 1538 was issued on the occasion.

Princeton University

The third *Summer Seminar in Arabic and Islamic Studies* will be held in the Graduate College, Princeton University, Princeton, N. J., under the directorship of Professor Philip K. Hitti, for a period of six weeks beginning Saturday morning, June 21, 1941. The courses are open to a limited number of men and women of graduate standing and are designed to meet the needs of new students as well as those who attended the Seminars of 1935 and 1938. Teachers and students of philosophy and religion, Near Eastern and medieval history, Romance languages and fine arts will be offered an opportunity to acquire first-hand knowledge of some of the sources in the Islamic phases of their respective subjects.

Courses will be offered in the Arabic, Turkish and Persian languages, as well as in Arab history and literature, Turkish history, and Islamic art and archeology.

Visiting lecturers will deliver each a series of lectures dealing with different phases of Islam, Moslem culture in Spain and Sicily, the Eastern Mediterranean and Central Asia.

The tuition fee for the Seminar is $40.00. Fees for room and board at the Graduate College are $20.00 a week per person. A limited number of grants-in-aid are available, mainly through the coöperation of the American Council of Learned Societies, for specially recommended and qualified students. Enrollment is limited to 33 students.

For further information address Dr. Nabih A. Faris, P. O. Box 342, Princeton, New Jersey.

London, Ontario

At the December 1940 meeting of the *Osler Society of London* Don Woodhouse, '41 presented a paper on the History of Diabetes.

The Society held its 14th annual banquet on January 24, 1941. It set a precedent by having as its guests physicians, their wives and students numbering over 150. The guest speaker was Dr. W. G. Penfield, Honorary President of the Osler Society and Director of the Montreal Neurological Institute. Dr. Penfield pictured Osler from a different angle than the other Honorary Presidents of the Osler Society. He met Osler while a Rhodes scholar in Oxford and he was in Osler's home as a war casualty. He read excerpts from letters written by a student to his mother in which the student tells many interesting anecdotes about Osler, who had an abiding love of mankind and a sympathetic interest in the distressed.

The February meeting was devoted to *Cushing—Pituitary Gland—Surgery of the Brain* and the March meeting will see a discussion of *Doctor's Contributions to Fields other than Medicine.*

President W. E. Pace, '41 will be happy if all members of the Society compete for the Rowntree prizes in Medical History.

Philadelphia

An exhibit illustrating syphilis in bone and the history of this disease in bone since 1296 A. D. was held at the College of Physicians. It was displayed by the Mütter Museum and the Library of the College.

Professor William Arthur Heidel died suddenly in Middletown, Conn. on January 15, 1941, at the age of 72 years. After studies in classical philology at the Central Wesleyan College, the University of Berlin and the University of Chicago Dr. Heidel was Acting Professor of Latin (1890-91) and Professor of Greek (1891-94) at Illinois Wesleyan University, Docent in Ancient Philosophy at the University of Chicago (1895-96), Professor of Latin at Iowa (now Grinnell) College (1896-1905), Professor of Greek (1905-28) and Research Professor of Greek (1928-36) at Wesleyan Uni-

versity. He was emeritus since 1936. From 1928 on he was also research associate of the American Council of Learned Societies and the Carnegie Institution of Washington.

Prof. Heidel published a large number of monographs covering various aspects of pre-Socratic, Platonic and Aristotelian philosophy. He became increasingly interested in Greek science and medicine and contributed valuable studies to the field. His last book was a monograph on *Hippocratic Medicine* that will be published by the Columbia University Press.

News from Latin America

Argentina

The following were nominated to honorary membership in the *Ateneo de Historia de la Medicina* of the Department of the History of Medicine of the University of Buenos Aires: Paul Diepgen, Carlos Martínez Durán, M. Laignel-Lavastine, Juan B. Lastres, Esmond R. Long, Gregorio Marañón, Carlos Enrique Paz Soldán, Henry E. Sigerist, M. Tricot-Royer.

News from Europe

Italy

Three new chairs of medical history have been established, in Florence (Prof. Nardi), Turin (Prof. Oliaro), and Siena (Prof. Garon). Prof. Castiglioni's chair in Padua has been filled with Castiglioni's disciple, Prof. G. Tanfani.

Roumania

We are sorry to hear that the chair of medical history at the University of Cluj has been abolished. The Institute of the History of Medicine of Cluj, however, is being continued. Its director is Prof. V. Bologa, one of the ablest medical historians of the younger generation.

The " Conference of Medical History " in Bucharest has also been abolished but the Institute of the History of Medicine of Bucharest, founded and directed by Dr. V. Gomoiu, is continuing its activities. It has increased its library considerably and has published a number of valuable monographs.

The Royal Roumanian Society of the History of Medicine, founded in 1929 by Dr. V. Gomoiu, is flourishing now as in the past and is holding monthly meetings.

Sweden

We were glad to have news from Dr. Erik Waller who has many friends in America. Dr. Waller was a surgeon in Lidköping for almost 32 years. During that time he assembled a unique collection of old medical books including many rare incunabula and manuscripts. Upon reaching his 65th birthday Dr. Waller retired and is now living in Stockholm (Strandvägen 59) as librarian of the Swedish Medical Association. He is succeeding the well-known medical historian O. T. Hult who retired from the Library after having reached the age limit of 70 years. Those of our members who attended the International Congress of the History of Medicine in Yugoslavia in 1938 will remember both Dr. Waller and Dr. Hult as delightful gentlemen and fine scholars who represented their country in a most dignified way.

Book Catalogues

H. P. Kraus, 64 East 55th Street, New York City, Catalogue No. XX: History of Science and Medicine, Illustrated Books Mostly of the XVth and XVIth Centuries.

Argosy Book Stores, 114 East 59th Street, New York City, Catalogue 177: Medicine in Rare and Early Editions, arranged by subjects.